

- PN - ARV - 067

Botany
of
The National Parks of Haiti

by

Walter S. Judd



**Floristic Study of
La Visite and Macaya National Parks
HAITI**

by

**Walter S. Judd, PhD
Department of Botany
University of Florida**

**Gainesville, Florida
January 1986**

**Prepared for USAID/Haiti under contract Number
521-0169-C-00-3083-00**

**Floristic study of La Visite and Macaya National Parks,
Haiti.**

Walter S. Judd
Department of Botany
220 Bartram Hall
University of Florida
Gainesville, FL 32611

The island of Hispaniola in the Greater Antilles includes peaks of the highest elevations in the Caribbean, and its mountainous areas are covered with cloud forests, high to low elevation Pinus occidentalis forests, wet forests on limestone, and sclerophyllous thickets. Thus, the island's flora is quite diverse (see Urban, 1920-21, 1923; Barker & Dardeau, 1930; Ciferri, 1936; Moscoso, 1943; Howard, 1973). In spite of this diversity, some areas of Hispaniola have been relatively poorly collected. No complete flora of either tracheophytes (i.e., vascular plants) or bryophytes (i.e., mosses, liverworts, hornworts) is available, although a generic flora exists, i.e., La Flore D'Haiti (Barker & Dardeau, 1930), a checklist of seed plants, i.e., Catalogus florae Domingensis (Moscoso, 1943; with supplement, Jiménez, 1966), and treatments for certain groups, i.e., Flora of Hispaniola: part 1. Celastrales, Rhamnales, Malvales, Thymelaeales, Violales (Liogier, 1981) and La Flora de la Española II and III (Liogier, 1983, 1985). Urban's Flora dominicensis (1920-21) and Pteridophyta dominicensis (1925) are also useful. In addition, important information on the vascular flora of the island is contained in a series of papers by Urban (1921, 1926a & b, 1927, 1928, 1929a & b, 1930, 1931a & b) based on the collections of E. L. Ekman, and in Urban's Symbolae Antillanae (1898-1928). A preliminary list of mosses of Hispaniola has been published (Buck & Steere, 1983); other useful papers dealing with Hispaniolan bryophytes include Müller (1898), Williams (1930), Thériot (1944), Arnell (1956), Crum & Steere (1958), Crum (1965), and Judd (1980). Relatively few tracheophyte or bryophyte groups occurring in Hispaniola have been recently monographed and there is a great need for increased monographic study of neotropical groups. Vascular floras of the island are being prepared by Dr. Alain H. Liogier (of the Botanic Garden of the University of Puerto Rico, at Rio Piedras, Puerto Rico) and by Dr. Thomas Zanoni (of the Jardín Botánico Nacional, Santo Domingo, Dominican Republic) and contributors, and Dr. William Buck (of the New York Botanical Garden) is working on a bryophyte flora of the West Indies. A very useful annotated bibliography of the flora and vegetation of Hispaniola is given by Zanoni, Long and McKiernan (1984).

The vascular plant and bryophyte floras of the high elevations of the Massif de la Hotte and Massif de la Selle are among the most poorly known of the island. The most important plant collectors in the Morne Formon/Pic Macaya region (Massif de la Hotte) are E. L. Ekman and H. D. Barker. They visited and collected in this region from December, 1926 to January, 1927; the results of this fascinating excursion are presented in an article by Ekman (1928), and the many "new" species resulting from their collections were mainly described by Urban or Urban and Ekman. The valuable field work of Ekman and Barker in the Massif de la Hotte is commemorated in the names of several distinctive endemics of this region (see lists). A xerographic copy of Ekman's field notes (University of Florida herbarium, FLAS, library) has also been studied, and reveals (along with Ekman's published account), a fairly detailed picture of the flora of the region as it existed in the 1920's. Erik Ekman again collected in the high elevations of the Massif de la Hotte (Morne la Hotte, above Les Roseaux) in September, 1928. Leslie R. Holdridge (former Division Manager, Pine Forest Project, Haiti) botanized on Morne Macaya (to near peak) in February, 1941. The natural history of the Massif de la Hotte is outlined by Dod (1984) who briefly comments on the distinctive and highly endemic flora of the region.

Erik L. Ekman is also the most important plant collector in the Morne la Visite/Pic Cabaio region (Massif de la Selle). Ekman botanized in this region on several occasions in the 1920's. Others who collected either in localities now within the La Visite park or in adjacent regions include: W. Buch, Padre E. Christ, and Padre L. Picarda; see Moscoso (1943) for brief outlines of their activities. More recently T. Zanoni, M. Mejia, and assistants also have collected near this region. Their work is commemorated in the names of many plants occurring in the Massif de la Selle (see list). A brief description of Ekman's collecting experiences in the Massif de la Selle has been published (Ekman, 1926), and additional information on the diverse and highly endemic flora of this region is present in Ekman's personal field notes (FLAS, library). Holridge's (1947) account of the similar pine forests of the Morne des Commissaires is also of interest.

From a study of published accounts of the flora of the localities now contained in the Macaya and La Visite National Parks and from Ekman's personal field notes, it appears that most of the members of the vascular flora present in the 1920's still occur within (or adjacent to) the two national parks--inspite of the extensive human-caused disturbances in some localities. Noteworthy species collected in these areas by Ekman (unpublished field notes) but not recollected in this study are listed in Tables 1 and 2. It should be stressed that these lists are not complete, but stress endemic and/or conspicuous woody taxa.

Table 1. Noteworthy seed plants not recollected in La Visite National Park

Apium graveolens, Callicarpa sellleana, Calyptranthes ternifolia, Catesbaea ekmaniana, Cestrum dolichopus, Cleyera vaccinioides, Coccothrinax montana, Cordia anisodonta, Eupatorium sellleanum, Gesneria bullata, Herodontia mikanioides, Ilex cubana, Liabum subacaule, L. sellleanum, Miconia albiviridis, M. favosa, Ossaea limon, Passiflora ekmanii, Peperomia cabaiatum, P. ramosa, Pilea cardiophylla, P. diandra, Proustia stenophylla, Rhynchospora aristata, Salvia tippenhaueri, Scolosanthus sellleanus, Senecio constanzae, Ternstroemia gracilifolia, Tillandsia fendleri, T. paniculata.

Table 2. Noteworthy seed plants not recollected in Macaya National Park.

Arceuthobium bicarnatum, Arthrostylidium multispicatum, Cleyera vaccinioides, Graffenrieda chrysandra, Guarea sphenophylla, Guettarda torbeciana, Hottea torbeciana, Hypericum fuertesii, Mecranium alpestre, Meriania ekmanii, Miconia plumieri, M. niedenzuana, Mikania hotteana, M. rhomboidea, Ossaea allotricha, Palicourea torbeciana, Piqueria trinerva, Pilea godetiana, Podocarpus aristulatus, Rubus barkerianus, Schlegelia brachyantha, Scolosanthus densiflorus, Solanum testaceum, Vernonia ekmanii.

In addition, two endemic bryophytes have been described from the high elevations of the Massif de la Hotte and have not been recollected; these are: Hymenostomum castaneum Crum & Steere, and Campylopus haitensis Thér.

Endangered Species

Top priority for protection should be given to species endemic to Hispaniola, and especially to those endemics with ranges restricted to the Massif de la Hotte and/or the Massif de la Selle (or with more local distributions within these mountain ranges). Species very susceptible to disturbance (e.g., Juniperus ekmanii) should be given special concern. Ecological/biological studies of these species are urgently needed; unfortunately very little is known beyond the most basic taxonomic information for most plant species endemic to these regions.

Juniperus ekmanii may be the woody species most in danger of extinction. This species has a very limited range, and does not sprout vegetatively after fire or cutting (both very common in the region). Thus in many parts of the La Visite park (even areas seemingly little disturbed and with diverse native vegetation) the species is present only in the form of dead stumps and logs. The species is surviving in the Tete Opaque region (where it is locally common), and urgent efforts should be made to protect the few remaining individuals of this interesting endemic species. A large population of this species also is known from the mountains south of Puerto Escondido in the Sierra de Baoruco of the Dominican Republic (T. Zanoni, pers. comm.). Other endemics that seem to be rare or very restricted in distribution within the parks include: Hypericum millefolium, Miconia rigidissima, Gesneria hypoclada, Siphocampylus caudatus (La Visite); Rondeletia domatiata (Morne d'Enfer); and Myrsine magnoliifolia, Meliosma abbreviata, Calycogonium torbecianum, Tabebuia conferta, and Brunfelsia picardae (La Hotte). But it should be stressed again, that all endemic species should be considered taxa of special concern, and protected from further destruction due to human-caused disturbances. Endemic species are listed in Table 3. The degree of endemism is much greater in the flowering plants than in the ferns, mosses, or liverworts. Genera occurring in the parks with many endemic species include: Cestrum, Dendrophthora, Eupatorium, Lyonia, Mecranium, Miconia, Ossaea, Pilea, Rondeletia, Salvia, Senecio, and Wallenia.

Management of Vegetation

The hardwood/cloud forest areas of La Visite National Park require protection from cutting, burning and clearing. These actions are extremely destructive to this plant community. At the present time there are enough areas of intact forest (with endemic species still surviving) that the cloud forest areas have the capability of recovering from the effects of human disturbance if repeated clearing and burning is prohibited (or at least greatly reduced) in the region. At the present time these forests exist as a mosaic of reasonably intact to very disturbed (fields, pastures, etc.) communities. The wet forest on limestone at the low elevations in Macaya National Park is also very susceptible to fire. This forest community is now being fairly rapidly destroyed by clearing and burning. In contrast, the pinelands (of both parks) probably require periodic (and controlled) fires to maintain pine (and associated species) regeneration. However, Holdridge (1947) considered the high elevation pine forests to be maintained, at least in part, by cold temperatures. On Morne Formon/Pic Macaya the high elevations are occupied by a complex mosaic of cloud forest and pine forest communities; this mosaic is

likely maintained by a pattern of periodic fires, with the composition of the community probably strongly influenced by the time since the last fire. The pinelands of both parks are in need of ecological study in order to determine the appropriate timing, frequency and intensity of controlled fires probably required to maintain the community. At present fires are probably too frequent (and/or too severe), and are often set by the local people, although natural (lightening set) fires undoubtedly also occur.

Table 3. Hispaniolian Endemic seed plants occurring in Parc Macaya and Parc La Visite, Haiti

Abbreviations and symbols: Occurring in Parc Macaya--M;
occurring in Parc La Visite, LV; plant endemic to either
Massif de la Hotte or Massif de la Selle--*.

<u>Agave antillarum</u> M, LV	<u>Amyris apiculata</u> M*
<u>Andropogon urbanianus</u> LV	<u>Ardisia fuertesii</u> M, LV
<u>Ardisia picardae</u> LV*	<u>Arthrostylidium haitiense</u> M, LV
<u>Asketanthera picardae</u> M*	<u>Baccharis myrsinoides</u> M, LV
<u>Banara splendens</u> M	<u>Begonia domingensis</u> LV
<u>Begonia platyptera</u> LV*	<u>Begonia plumieri</u> M
<u>Begonia pycnantha</u> M	<u>Brunfelsia picardae</u> M
<u>Buddleja domingensis</u> LV	<u>Bumelia subintegra</u> LV*
<u>Bunchosa ekmanii</u> LV*	<u>Calycogonium apiculatum</u> M*
<u>Calycogonium calycopteris</u> M	<u>Calycogonium torbecianum</u> M
<u>Calyptranthes densiflora</u> LV*	<u>Calyptranthes hotteana</u> M*
<u>Calyptranthes nummularia</u> M, LV	<u>Carex ekmanii</u> LV
<u>Castilleja haitiensis</u> M*	<u>Cestrum bicolor</u> M*
<u>Cestrum brevifolium</u> LV	<u>Cestrum coelophlebium</u> M, LV
<u>Cestrum filipes</u> M*	<u>Cestrum inclusum</u> M, LV
<u>Cestrum mononeurum</u> LV	<u>Cestrum picardae</u> M
<u>Cestrum violaceum</u> LV*	<u>Cleyera ternstroemioidea</u> M*
<u>Coccocloba pauciflora</u> M	<u>Coccocloba picardae</u> LV*
<u>Coccothrinax montana</u>	<u>Cyperus picardae</u> LV
<u>Danthonia domingensis</u> LV	<u>Daphnopsis crassifolia</u> M, LV
<u>Dendropanax selleanus</u> M	<u>Dendropanax histratus</u> LV
<u>Dendropemon pycnophyllus</u> LV	<u>Dendrophora brachystachya</u> M
<u>Dendrophthora carnosa</u> M*	<u>Dendrophthora colorata</u> M*
<u>Didymopanax tierneyi</u> M, LV	<u>Dendrophthora cinervis</u> M*
<u>Epilobium coloratum</u>	<u>Dendrophthora octopus</u> LV
<u>Erigeron decumbens</u>	<u>Dendrophthora sp.</u> M*
<u>Eugenia formosa</u>	<u>Dendrophthora virens</u> V
<u>Eugenia picardae</u>	<u>Dendrophthora virens</u> M*
<u>Eupatorium cabrerianum</u>	<u>Dendrophthora virens</u> M*
<u>Eupatorium illitum</u>	<u>Dendrophthora virens</u> M*
<u>Eupatorium porphyrocladum</u>	<u>Eupatorium sp. nov. A.</u> LV*
<u>Eupatorium stigmaticum</u> M	<u>Eupatorium urbanii</u> M*
<u>Exostemma picardae</u> M	<u>Fuchsia pringsheimii</u> M, LV
<u>Fuchsia triphylla</u> LV	<u>Galium brevipes</u> LV
<u>Gesneria aspera</u> M	<u>Gesneria fruticosa</u> M
<u>Gesneria hypoclada</u> LV*	<u>Gesneria viridiflora</u> ssp. <u>acrochordonanthe</u> M*
<u>Gnaphalium eggersii</u> LV	<u>Gnaphalium selleanum</u> LV*
<u>Guzmania ekmanii</u> M	<u>Haenianthus oblongatus</u> M*
<u>Henrietella elliptica</u> M	<u>Heronima domingensis</u> M
<u>Hypericum fuertesii</u> LV	<u>Hypericum millefolium</u> LV*
<u>Hyptis schusteri</u> M	<u>Ilex fuertesiana</u> LV
<u>Ilex</u> sp. nov. A. LV*	<u>Illicium ekmanii</u> M
<u>Jacaranda poitei</u> M	<u>Juniperus ekmanii</u> LV*
<u>Larlacea alpestris</u> LV	<u>Lobelia</u> sp. nov. A. M*
<u>Luania mauritii</u> M	<u>Lyonia buchii</u> LV
<u>Lyonia microcarpa</u> LV*	<u>Lyonia truncata</u> var. <u>truncata</u> LV*

Lyonia rubiginosa var. *costata* M, LV
Malpighia macracantha LV* *Maytenus hotteana* M*
Mecranium microdictyum M* *Mecranium salicifolium* M*
Mecranium sp. nov. A. M* *Mecranium tricostatum* M*
Mecranium tuberculatum M *Meliosma abbreviata* M*
Meliosma impressa LV *Meliosma recurvata* M*
Melothria domingensis LV *Meriania involucrata* LV
Meriania sp. nov. A. M* *Meriania* sp. nov. B. M*
Meriania squamulosa M* *Miconia apiculata* M*
Miconia barkeri M* *Miconia hypiodes* M*
Miconia lanceolata LV *Miconia markgraffii* LV*
Miconia ossaeifolia M* *Miconia rigidissima* LV*
Miconia selleana LV* *Miconia* sp. nov. A. M*
Miconia subcompressa M, LV *Miconia xenotricha* M, LV
Mikania cyanosma M* *Mikania dissecta* M*
Mikania tripartita LV* *Mitracarpus decumbens* LV*
Myrcia tiburoniana M* *Myrica picardae* M, LV
Myrsine magnoliifolia M* *Narvalina domingensis* M
Ocotea acarina LV* *Ossaea curvipila* M*
Ossaea setulosa M* *Ossaea* sp. nov. A. M*
Pachyanthus blancheanus M* *Pachyanthus hotteanus* M
Peperomia dominicana M *Peperomia leonardii* LV
Peperomia michelensis M* *Peratanthe ekmanii* M*
Phyllanthus lindenianus var. *inaequifolius* LV*
Phyllanthus myriophyllum M* *Picrasma selleana* LV*
Pilea baltenweckii M *Pilea cephalantha* LV*
Pilea distantifolia M* *Pilea domingensis* M, LV
Pilea formonensis M* *Pilea franquervilleana* LV*
Pilea hepatica M, LV *Pilea lanceolata* LV
Pilea lapidincola LV* *Pilea leptocardia* M
Pilea propinqua LV *Pilea psilogynae* LV*
Pilea serpyllacea M* *Pilea stolonifera* M
Pilea torbeciana M* *Pinus occidentalis* M, LV
Piper oviedoi M *Pitcairnia elizabethae* M
Podocarpus aristulatus LV *Psychotria alpestris* M*
Psychotria baltenweckii LV* *Psychotria liogieri* M, LV
Rheedia barkeriana M* *Renealmia densiflora* M*
Rhynchospora elongata var. *ekmanii* M *Rhynchospora elongata* var. *ekmanii* M
Rhytidophyllum bicolor Urb. *Rondeletia carneae* LV*
Rondeletia christii LV* *Rondeletia formonica* M*
Rubus argentifrons LV *Rubus eggersii* M
Rubus haitiensis LV *Rubus sellleanus* M, LV
Salvia arborescens M *Salvia* sp. nov. A. M*
Sapium buchii LV *Sapium haitense* M*
Senecio buchii LV* *Senecio hotteanus* M*
Senecio picardae LV *Senecio stenodon* M*
Siphocampylus caudatus LV* *Siphocampylus sonchifolius* M
Solanum hotteanum M* *Solanum formonense* M*
Stevensia hotteana M* *Symplocos hotteana* M*
Tabebuia conferta M* *Ternstroemia barkeri* M*
Tillandsia hotteana M, LV *Turpinia picardae* M, LV
Wallenia aquifolia M *Wallenia ekmanii* M*
Wallenia sp. nov. A. M* *Vernonia buxifolia* M
Vernonia saepium M* *Zanthoxylum haitiensis* M*

Zanthoxylum tetraphyllum LV* Zeugites haitiensis M

Plant formations in the Macaya National Park and adjacent areas, Massif de la Hotte

The vegetation of this region may be divided into two major types. The first is an extremely diverse Wet Forest on Limestone; see discussion of this formation in Howard (1973). This vegetation type occurs at the lower elevations of the park (and to a much greater extent, outside the park in the hills to the south and west of Formon). This formation extends upward to ca. 1250 m alt., and we collected in this plant community to elevations as low as ca. 850 m. The second vegetation type at La Hotte is composed of a complex mosaic of the Pine Forest and Cloud Forest formations; see Howard (1973) for discussion of these communities. These forests intergrade with the lower elevation wet limestone forest in several areas, and localities with mixed species compositions occur (e.g., in moist forest below "1650 m camp" on southern slope of Morne Formon, and in Morne Cavelier region). The higher elevation forests show all variation between moist dense Cloud Forest and open, savanna-like Pine Forest depending upon (1) local edaphic factors, e.g., soil, exposure, local rainfall, wind patterns, and (2) time since last disturbance, especially fire, but also hurricane or human-caused disturbance. Some conspicuous sub-types include: cloud forest, an extremely moist forest with a few or no overstory pines [Pinus occidentalis], large and conspicuous individuals of Bois Tremble [Didymopanax tremulum], a diverse selection of shrubs and small trees such as Garrya fadyenii, Myrsine coriacea, Brunellia comocladiifolia, Persea anomala, Weinmannia pinnata, Cestrum coelophlebium, Miconia spp., Cyathea harrisii, Alsophila minor, and the climbing bamboo, Arthrostylidium haitiense; moist pine forest with scattered shrubs, blackberrys [Rubus spp.], and ferns; and open extremely rocky pine forests with Agave antillarum, Rhytidophyllum auriculatum, Eupatorium flavidulum, Baccharis myrsinoides, Gyrotaenia myriocarpa, and Senecio stenodon. Open windswept ridges near Pic Formon are dominated by dense thickets of Ilex obcordata, I. macfadyenii, Myrica picardae, Baccharis myrsinoides, Symplocos hotteana, Miconia hypoides, M. apiculata, M. barkeri, Ternstroemia barkeri, Weinmannia pinnata, Vaccinium racemosum, Lobelia rotundifolia, and Psychotria liogieri. The cloud forests and moister pine forests are better developed on Morne Formon (especially the northern slope) than Morne Macaya; the southern slopes of Pic Macaya are especially open and dry, and fire seems to be more frequent in these areas. Frequent fires kill young broad leaves species (e.g., Myrsine coriacea, Miconia spp., Cestrum spp., Weinmannia pinnata, Didymopanax tremulum, Citharexylum caudatum, Persea anomala, Psychotria alpestris, Rondeletia formonica, Garrya fadyenii) and favor pine germination, a diverse fern understory (especially Lophosoria quadripinnata, Histiopteris incisa, Pteridium aquilinum, Culcita conifolia, Gleichenia spp., and Blechnum

tuerckheimii), and the growth of fire adapted species (such as Rubus spp. and Senecio stenodon).

Dominant and/or characteristic trees and shrubs of the pine forest/cloud forest zone (above ca. 1300 m.) on Formon and Macaya include: Pinus occidentalis, Brunellia comocladifolia, Didymopanax tremulum, Dendropanax arboreus, D. selleanus, Myrsine coriacea, Weinmannia pinnata, Cyathea harrisii, Alsophila hotteana, A. minor, Miconia hypoides*, M. subcompressa, M. barkeri*, M. apiculata*, M. tetrastoma, M. ossaeifolia, Haenianthus oblongifolius, Hyptis schusteri*, Citharexylum caudatum, Trema micrantha, Persea anomala, Ocotea foeniculacea*, Gyrotaenia myriocarpa, Psychotria liogieri, P. alpestris*, Lobelia rotundifolia, L. robusta, Garrya fadyenii, Cestrum coelophlebium, C. filipes*, Palicourea alpina, Symplocos hotteana*, Calyptranthes hotteana*, C. nummularia, Ilex obcordata*, I. macfadyenii*, Rondeletia formonia*, Ternstroemia barkeri*, Myrica picardae*, Blechnum underwoodianum, Eugenia formonica*, Heterotrichum umbellatum, Senecio stenodon, Besleria lutea, Vaccinium racemosum, Solanum formonense*, S. hotteanum*, Sapium haitiense, Trichilia havanensis, Eupatorium flavidulum, E. urbani, Tabebuia berteri, Zanthoxylum haitiense, Agave antillarum, Ardesia fuertesii, Daphnopsis crassifolia, Baccharis myrsinifolia, Rhytidophyllum auriculatum, Vernonia buxifolia, V. saepium, Pluchea symphytifolia, Henriettea barkeri*, Pachyanthus blancheanus*, Meriania spp., and Banara splendens. (Species especially characteristic of Pic Formon and the upper elevations of the Formon ridge are indicated with an asterisk.) It is of interest that the primitive taxon, Illicium ekmanii, occurs in this forest on Morne Cavalier. The most showy-flowered species are Fuchsia pringsheimii and Lobelia rotundifolia, and both are characteristic of wet areas.

Vines include the conspicuous bamboo, Arthrostylidium haitiense, along with the ferns, Hypolepis hispaniolica and Odontosoria aculeata, and the flowering plants, Smilax havanensis, Mikania spp., Cissus dissecta, Passiflora sexflora, P. murucuja, Rajania ovata, Senecio hotteana, and Columnea domingensis. Herbs are not a major element of this forest, however, characteristic herbaceous species include: Rubus selleanus, R. eggersii, Peratanthe ekmanii, Isachne rigidifolia, Zugites haitiensis, Uncinia hamata, Panicum glutinosum, Andropogon glomeratus, Relbunium hypocarpium, Erigeron domingensis, Hydrocotyle pusilla, Scrophularia minutiflora, Begonia plumieri, Psychotria uliginosa, and many species of Pilea and Peperomia. The epiphytic bromeliads, Tillandsia caribaea and Vriesea sintenisii, are abundant, as are various epiphytic stem parasites such as: Dendrophthora carnosa, D. cypressoides, D. brachystacha, D. versicolor, and Dendropemon parvifolius. Many terrestrial and epiphytic ferns also occur (see species list).

The moist pine forest of the peak and ridge of Morne Formon contains a fair number of local endemics (e.g.,

Miconia apiculata, M. barkeri, M. hypiodes, Mecranium tricostatum, Cestrum filipes, Psychotria alpestris, Rondeletia formonia, Ternstroemia barkeri, Myrsine magnoliifolia, Solanum formonense, Pilea formonica). In contrast, the dryer forest of Pic Macaya contains only few endemics (e.g., Miconia apiculata, M. hypiodes, Cestrum filipes), and is not as diverse. However understory ferns are more conspicuous on Pic Macaya, probably because the increased frequency of fire on Pic Macaya allows a more open pine forest, thus providing more available habitat for this group.

The moist forest on limestone, occurring in the low hills in the vicinity of Formon, itself, is very diverse, and shows an extreme development of endemic species. This formation is mainly outside the park boundaries, but was sampled in order to contrast this forest with the higher elevation forests of Macaya and Formon. There are no real dominants in this forest--dominance is shared by many species. Important and/or striking trees or shrubs include: Dendropanax arboreus, Phyllarthus myriophyllum, Lunania mauritii, Prunus occidentalis, Prunus myrtifolia, Beilschmeidia pendula, Ardesia fuertesii, Tabebuia conferta, Mecranium salicifolium, M. microdictyum, M. sp. nov.A, Miconia subcompressa, M. laevigata, Amyris apiculata, Piper hispidum, P. confusum, P. amarum, Calycogonium apiculatum, C. calyopteris, Cestrum picardae, C. bicolor, Lobelia robusta, Psychotria berteroana, P. pubescens, Zanthoxylum haitense, Z. martinicense, Alchornea latifolia, Chrysophyllum argenteum, Rhytidophyllum bicolor, Gesneria spp., Solanum antillarum, S. torvum, S. erianthum, Turpinia picardae, Allophylus crassinervis, Polygala penaea, Casearia sylvestris, Guarea guidonia, Comocladia pinnatifolia, Cupania americana, Meliosma recurvata, Palicouria alpina, Clusia clusioides, Gymnanthes lucida, Eugenia glabrata, E. christii, Eupatorium stigmaticum, E. nervosum, E. microchaetum, Besleria lutea, Cecropia peltata, Heliconia bahai, Daphnopsis americana, D. crassifolia, Brunfelsia picardae, Vernonia saepium, Jacquinea eggersii, Ossaea setulosa, Dipholis cubensis, Nectandra patens, N. coriacea, Cinnamomum cf. montanum, Ficus citrifolia, Cyathea furfuracea, Cnemidaria horrida, Alsophila hotteana, Senecio stenodon, Salvia spp., Rheedia barkeriana, Calyptanthes sintenisii, Coccothrinax cf. montana, Maytenus hotteanus, Hamelia patens, Didymopanax tremulum and Micropholis polita. Common vines include: Cissampelos pareira, Serjania polyphylla, Cissus verticillata, Cayaponia americana, Stigmaphyllon lingulatum, S. angulosum, Philodendron consanguineum, Columnea domingensis, Senecio hotteana, Marcgravia oligandra and Anthurium scandens. Commonly found herbs are Begonia pycantha, Renealmia jamaicensis, R. densiflora, Ichnanthus pallens, Lasiacis divaricata, and a great many species of Pilea and Peperomia. Terrestrial ferns are abundant (see species list). The herbaceous scroph, Castilleja haitiensis, occurs in disturbed areas,

along with many weedy species. Members of the family Bromeliaceae are very abundant, including: Tillandsia fasciculata, T. jenmanii, T. fendleri, Catopsis nitida, Guzmania lingulata, G. ekmanii, and Vriesea macrostachya. Loranthaceous parasites, such as Dendrophthora serpyllifolia, Phoradendron anceps and P. piperoides, are frequent. The epiphytic ericad, Sphyrospermum majus, is very common; this forest also includes a great diversity of epiphytic ferns (see list), including Ophioglossum palmatum, a striking plant with broad palmately lobed leaves. The woods in the vicinity of Formon form a mosaic of habitats due to the extensive human-induced destruction in this region--and every intermediate exists between fairly undisturbed forest and cultivated fields or bare limestone rock.

As mentioned earlier, this plant community contains a great many endemics, and some are even limited to the Formon area (see species list and Table 3). The melastome genus, Ekmaniocharis, falls in this category; the area is also the center of diversity for the related genus Mecranium. An undescribed species of the latter genus was discovered by W. Judd and J. Skean in the Formon area. The endemic euphorb, Phyllanthus myriophyllum, is very striking due to its distinctive, norfolk-island-pine-like habit.

The vegetation of lower elevations (ca. 1000 m) in the Grande Ravine du Sud is a distinctive open, often rocky, pine forest, which is dryer than the higher elevation pine forests of Morne Formon and Pic Macaya. Associated shrubs include: Heterotrichum angustifolium, Gyrotaenia myriocarpa, Wigandia pruritiva, Trema lamarkianum, Hyptis schusteri, Senecio stenodon, Senna liquistrina, Garrya fadyenii, Besleria lutea, Rhytidophyllum sp., Piper aduncum, P. hispidum, Tabebuia berteri, Cestrum bicolor, Vernonia saepium, Beilschmeidia pendula, Prunus myrtifolia and Weinmannia pinnata. The beautiful terrestrial bromeliad, Pitcairnea elizabethae, is occasional in rocky areas. Common ferns include Thelypteris serra, Pteris longifolia and Neuroodium lanceolatum.

Plant formations in La Visite National Park and adjacent areas, Massif de la Selle

The plant formations occurring in the area of La Visite may be placed into two general categories: Pine forest, and Cloud Forest on limestone (hardwood areas or "rac-bois"); see Howard (1973). The two do intergrade, and many hardwood species can be found as scattered understory shrubs or small trees in moister localities within the pinelands. The moist hardwood forest occurs along the steep more or less north facing slopes from Tete Opaque, Beile Fontaine, and Pic Cabaio west to La Visite. This interesting, and diverse, hardwood community continues westward to Morne D'Enfer (and also eastward toward Pic La Selle), and shows much local

geographic variation. Certain species are limited to Morne Cabaio, Morne D'Enfer, etc., while others are more widely distributed along the ridge (see species list). The diversity and number of endemic species is higher in the hardwood forest than in the pinelands, although both contain endemics (see Table 3). Both formations include many areas that have been cleared and burned, and thus many weedy species occur. The number of temperate weeds that occur in the pinelands is especially striking, e.g., Prunella vulgaris, Fragaria vesca, Hypericum perforatum, Lampsana communis, Geranium rotundifolium, G. purpureum, Leontodon taraxacoides, Taraxicum officinale, Cynoglossum amabile, Euphorbia peplus, Tragopogon pratensis, Stellaria media, Cerastium glomeratum, Silene gallica, Plantago lanceolata, Verbascum thapsus, Leucanthemum vulgare, Medicago lupulina, Trifolium repens, Arenaria lanuginosa, Sonchus asper, Daucus carota, Lepidium virginicum, Barbarea verna, Brassica campestris, Cardamine hirsuta, Conyza canadensis, Lolium perenne, Oxalis corniculata, Erigeron karwinskyanus, Pteroselinum sativum, Pastinaca sativa, Galium aparine, Linum usitatissimum, Anagallis arvensis and Hieracium gronovii.

The pinelands can be divided into several sub-types which likely develop according to certain edaphic conditions (fire frequency, soil, exposure, etc.). These are (1) open rocky pinelands with many individuals of Agave antillarum (along with Myrica picardae, Eupatorium illitum and E. cabaionum, Garrya fadyenii, and Baccharis myrsinoides), (2) open pine savannas with Danthonia domingensis (along with Andropogon urbanianus and Rubus spp., and sometimes a few scattered shrubs, such as Lyonia microcarpa or Garrya fadyenii), (3) open ("typical") pinelands with scattered shrubs (especially Lyonia microcarpa, Myrica picardae, Baccharis myrsinoides, Garrya fadyenii, Eupatorium illitum, E. cabaionum) and the grasses and sedges, Andropogon urbanianus, A. glomeratus var. pumilis, Cyperus picardae, Carex ekmanii, Isachne rigidifolia, Panicum xalapense, Bromus unioloides, Zeugites americana, Melinis minutiflora and Chusquea abetifolia, and (4) moist pinelands with a nearly continuous understory of shrubs, some of which are also common in the moist hardwood communities.

Characteristic trees and shrubs of this mosaic of pineland vegetation types include: the dominant tree, Pinus occidentalis (endemic to island of Hispaniola, although a closely related species occurs in Oriente, Cuba), the shrubs or small trees, Baccharis myrsinoides, Garrya fadyenii, Lyonia microcarpa, Myrica picardae, Agave antillarum, Eupatorium illitum, E. cabaionum, Persea anomala, Bocconia frutescens, and to a lesser extent: Hypericum hypericoides, Lyonia truncata, I. rubiginosa var. costata, Ilex macfadyenii, Oreopanax capitatus, Daphnopsis crassifolia, Cestrum mononeurum, Solanum crotonoides, Bumelia subintegra, Salvia selleiana, Fuchsia triphyllum, F. pringsheimii, and Myrsine coriacea. A great many grasses and herbaceous

dicots occur in these open forests; the blackberrys, Rubus argentifrons, R. haitiensis and probably also R. selleanus, are everywhere common; some additional characteristic herbs include: Pilea spp., Mitracarpus decumbens, Galium brevipes and Relbunium hypocarpium, along with the many weedy species listed above. Pteridium aquilinum, bracken, is abundant; other common terrestrial ferns include: Lophosoria quadripinnata (especially on moist slopes), Campyloneurum angustifolium (especially rocky areas), Blechnum occidentale (especially rocky areas), and Woodsia montevidensis (on rocky slopes). The epiphytic bromeliads, Tillandsia hotteana, T. compacta, T. usneoides and Vriesea sintenisii, are locally conspicuous.

The very moist pinelands possess a nearly continuous and very well developed understory of broadleaved dicots, including many species that are also characteristic of the cloud forest/hardwood community. In addition to many of the species mentioned in the previous paragraph, the following trees and shrubs are common or occasional in these moister forests: Buddleja domingensis, Brunellia comocladifolia, Lobelia robusta, L. rotundifolia, Trema micrantha, Cestrum violaceum, Rondeletia carnea, Palicourea alpina, Myrsine acrantha, Miconia selleana, Turpinia picardae, Calyptranthes nummularia, and Cordia picardae. The climbing bamboos, Arthrostylidium haitense and Chusquea abietifolia, occur locally, and other frequent vines include: Smilax havanensis, Mikania tripartita, Passiflora orbiculata, and Valeriana scandens.

As mentioned above there is also floristic variability within the cloud forest/moist hardwood community. These areas range from very wet forests with conspicuous large individuals of Didymopanax tremulum (best developed in some areas on Morne D'Enfer, Morne Fe Noir, and the ravine just east of the Berac area) to drier and more open scrub-forests with the showy Senecio buchii and Agave antillarum (and even some intermixed pines; best developed in vicinity of Pic Cabaio). The greatest species diversity likely occurs in the hardwood forest extending from Morne Nacel northeast toward Pic La Visite, although the vicinity of Pic Cabaio and the region between Belle Fontaine, Roche Cabrit and Tete Opaque is also very diverse. The latter region is of particular interest because several species (e.g., Lyonia microcarpa, Myrica picardae) grow to an exceptionally large size in this area, and because two rare conifers, Podocarpus aristulatus and Juniperus ekmanii, occur here. Additional collecting is needed in this region.

Characteristic trees and shrubs of the moist hardwoods are: Senecio buchii, Senecio picardae, Gyrotaenia myriocarpa, Eupatorium illitum, E. cabaionum, Myrsine coriacea, M. acrantha, Daphnopsis crassifolia, Sapium buchii, Gesneria spp., Rhytidophyllum spp., Persea anomala, Ocotea acrantha, O. wrightii, Lobelia robusta, L. assurgens, L. rotundifolia, Brunellia comocladifolia, Cyathea harrisii, Alsophila minor, Garrya fadyenii, Miconia

selleana, M. xenotricha, M. markgraffii, M. tetrastoma, Didymopanax tremulum, Trema micrantha, Coccoloba picardae, Ardisia fuertesii, A. picardae, Weinmannia pinnata, Turpinia picardae, Picrasma selleana, Citharexylum caudatum, Lyonia buchii, Meliosma impressa, Agave antillana, Cestrum violaceum, C. monoeurum, C. inclusum, C. coelophlebium, C. brevifolium, Ilex macfadyenii, Dendropanax arboreum, Buddleja domingensis, Solanum crotonoides, S. umbellatum, Calyptranthes densifolia, C. cf. pallens, Bunchosa ekmanii, Malpighia macracantha, Oreopanax capitatus, Rondeletia christii, R. carnea, Psychotria baltenweckii, Cordia picardae, C. dependens, Tournefortia hirsutissima, Rondeletia domatiata, Salvia tuerckheimii, S. foveolata, Durantia arida, Satureja viminea, Eugenia picardae, Heterotrichum umbellatum, Mecranium amygdalinum, Meriania involucrata, Bumelia subintegra, Datura suaveolens, and Siphocampylus caudatus. Both Fuchsia pringsheimii and F. triphyllum are common, along with hybrids. Only one palm, Prestoea montana, is found in this forest. In places Arthrostylidium haitiense and A. multispicatum are common. Other climbing plants include: Passiflora sexflora, P. orbiculata, Marsdenia clausa, Columnea domingensis, Hypolepis hispaniolica, Odontosoria aculeata, Valeriana scandens, Cissampelos pareira, Mikania tripartita, Melothria domingensis, Cynanchum leptocladum and Rajania ovata. The bromeliads, Vriesea sintenisii and Tillandsia hotteana, are common. The loranthaceous parasites, Dendrophthora cupressoides and D. serpyllifolia, are common. These forests also contain some herbaceous species, especially in disturbed areas (see species list).

The vegetation of the larger ravines (and sinkholes) in the pinelands is composed of elements of this community. The Riviere Blanche contains the best developed hardwood community, although the smaller ravine to the north of the Park Center/Headquarters, i.e., Grande Ravine, is also fairly well developed (on south slope). The woody dominants of the ravine systems are essentially those of the hardwood forests of the north facing slopes/cliffs within the park. However, an interesting additional species is Sambucus canadensis; an introduced and escaped shrub that is common along the Riviere Blanche (and in other moist ravines) and is also planted along the edges of fields and around homesteads in the pinelands. Some important herbaceous species occurring in the various ravines (especially on steep and often rocky slopes) include: Erigeron dissectus, Chaptalia albicans, Begonia platyptera, Zeugites americana, Phyllanthus lindenianus, Pilea spp., Peperomia spp., Woodsia montevidensis, Polystichum triangularum, Diplazium spp., Asplenium spp., Thelypteris spp., Selaginella leonardii, and Lycopodium spp.. Several species occur in the moist soil along the edge of (or as emergent aquatics in) the Riviere Blanche (and also along other smaller streams in the region), these include: Nasturtium officinale, Poa annua, Fumaria carpreolata, Galium aparine, Epilobium coloratum,

Stachys arvensis, Pilea psilogyne, Euphorbia peplus,
Pastinaca sativa, and Rumex obtusifolius.

The Lists

The following checklists are arranged by major taxonomic group (i.e., vascular plant, mosses and liverworts) and geographic area (i.e., Massif de la Hotte, Massif de la Selle). The systematic arrangement of flowering plant families follows R. F. Thorne (1983), Proposed new realignments in the angiosperms; the arrangement of the ferns follows R. M. and A. F. Tryon (1982), Ferns and allied plants, with special reference to tropical America. Families of mosses and liverworts are listed alphabetically; family concepts follow Crosby & Magill (1978) for the mosses, and Farr, Leussink, & Stafleu (1979) for the liverworts.

Each entry follows a standardized format. The name of the species is followed by the authority, habit, habitat, frequency, elevational range, and localities at which the taxon was collected or observed. The collectors and collection numbers are given; collections were made by R. Baird, D. Franz, W. S. Judd, J. D. Skean, F. G. Thompson, and a few others. Nearly all collections were made during ca. 9 weeks of field work between January and June, 1984. The elevations and geographical localities are based only on our collections or sight records, and probably could be significantly expanded by additional field work. Finally, taxa endemic to Hispaniola or either the Massif de la Selle or Massif de la Hotte are indicated; occasionally other nomenclatural or taxonomic information is given.

A brief statistical summary of each flora is presented below. The coverage of woody flowering plants and conifers in the following lists is likely the most complete, followed by that of herbaceous flowering plants, ferns and "fern allies", mosses, and liverworts. Macrolichens and some fungi were also collected, but the identifications for these groups are still too incomplete to be included in this report (see appendix).

A total of 463 species of vascular plants (including 359 flowering plants, 1 conifer, 102 ferns & fern allies) were collected (or, for a few weedy taxa, observed) in Macaya National Park, and adjacent areas, Massif de la Hotte. These belong to 263 genera in 109 families. The largest families (excluding the Orchidaceae) include: Melastomataceae (34 spp.), Asteraceae (30 spp.), Polypodiaceae s. str. (22 spp.), Piperaceae (19 spp.), Rubiaceae (19 spp.), Urticaceae s. lat. (19 spp.), Dryopteridaceae (17 spp.), Poaceae (15 spp.), Solanaceae (13 spp.), Bromeliaceae (12 spp.), and Myrtaceae (12 spp.). The largest genera include: Pilea (Urticaceae--14 spp.), Peperomia (Piperaceae--13 spp.), Miconia (Melastomataceae--11 spp.), Grammitis (Polypodiaceae--8 spp.), Lycopodium (Lycopodiaceae--8 spp.), Thelypteris (Thelypteridaceae--8 spp.), Eupatorium (Asteraceae--7 spp.), Polypodium (Polypodiaceae--7 spp.), Psychotria (Rubiaceae--6 spp.), Solanum (Solanaceae--6 spp.), Mecranium (Melastomataceae--6

spp.), Tillandsia (Bromeliaceae--5 spp.), Cestrum (Solanaceae--5 spp.), Diplazium (Dryopteridaceae--5 spp.), Dendrophthora (Viscaceae--5 spp.), and Gesneria (Gesneriaceae--5 spp.).

The total vascular flora includes ca. 130 species endemic to Hispaniola (ca. 28% of flora), and of these, 69 are endemic to the Massif de la Hotte (ca. 15%). The degree of endemism among the flowering plants was slightly greater with 124 endemic species (ca. 34%), and of these, 68 (ca. 19%) endemic to the Massif de la Hotte. The percentage of endemic species among the ferns and fern allies was much less, i.e., ca. 6%. Families with large numbers of endemic species include: Melastomataceae (26), Urticaceae (12), Asteraceae (15), Solanaceae (7), and Myrtaceae (6). Genera with many endemic species include: Pilea, Miconia, Eupatorium, Mecranium, and Cestrum; other noteworthy genera in this regard are Dendrophthora, Wallenia, Senecio, Eugenia, and Ossaea.

A total of 99 species of mosses and over 49 species of liverworts were collected in Macaya National Park and adjacent regions. Very few of these species are endemic.

The vascular flora of the La Visite National Park (and adjacent areas of the Massif de la Selle) is documented by collections representing 308 species (including 249 flowering plants, 3 conifers, and 56 ferns and fern allies). These are distributed among 198 genera and 70 families. The largest families (omitting the Orchidaceae) are Asteraceae (25 spp.), Poaceae (14 spp.), Urticaceae (~ spp.), Rubiaceae (13 spp.), Melastomataceae (11 spp.), Dryopteridaceae (10 spp.), Solanaceae (10 spp.), Polypodiaceae (9 spp.), Araliaceae s. lat. (8 spp.), Piperaceae (8 spp.), Aspleniaceae (7 spp.), and Lamiaceae (7 spp.). The largest genera include: Pilea (Urticaceae--12 spp.), Peperomea (Piperaceae--8 spp.), Asplenium (Aspleniaceae--7 spp.), Miconia (Melastomataceae--7 spp.), Cestrum (Solanaceae--5 spp.), Polypodium (Polypodiaceae--5 spp.), Hypericum (Clusiaceae--4 spp.), Lycopodium (Lycopodiaceae--4 spp.), Lyonia (Ericaceae--4 spp.), Thelypteris (Thelypteridaceae--4 spp.), Tillandsia (Bromeliaceae--4 spp.).

The total vascular flora includes 90 species endemic to Hispaniola (ca. 29% of the flora), and, of these, 36 are endemic to the Massif de la Selle (ca. 12%). As in Parc Macaya, endemism is most pronounced among the flowering plants, with 85 endemic species (ca. 34%), and of these 35 species (ca. 14%) endemic to the Massif de la Selle. Only about 5% of the species of ferns and fern allies are endemic. Families with many endemic species include: Asteraceae (10), Urticaceae (8), Melastomataceae (7), Rubiaceae (6), Solanaceae (5), Ericaceae (4), Lamiaceae (4), and Myrtaceae (4). Genera with many endemic species in La Visite park include: Pilea, Miconia, Cestrum, Lyonia, Eupatorium, Rondeletia, and Salvia.

A total of 57 species of mosses and 16 species of liverworts were collected in or near La Visite National

Park; very few of these are endemic.

The flora of the two national parks, when taken together, comprises 657 different species of tracheophytes (i.e., flowering plants, conifers, ferns, whisk-ferns, and clubmosses and spikemosses) and ca. 193 species of bryophytes (mosses and liverworts), giving a grand total of 850 species of embryophytes. In addition, 47 species of lichens and 18 species of fungi were collecting, bringing to 915 the number of species considered in the following lists.

The results of this floristic study document the rich and highly endemic nature of the vascular (and especially angiosperm) floras of Macaya and La Visite National Parks, and confirm Ekman's (1926, 1928) brief reports on these areas. Howard (1973) has also pointed out that genera endemic to Hispaniola are concentrated in the mountains of northern and especially southern Haiti. In fact more endemic genera are restricted to the Massif de la Selle and/or the Massif de la Hotte than any other region of the island. Thus the protection of the few remaining forested localities in this region is critical, and it is hoped that this can be accomplished through the establishment and maintainence of these national parks.

Vascular Plants collected in Macaya National Park, and adjacent areas, Massif de la Hotte, Haiti.

Division Tracheophyta [collections identified by W. S. Judd, unless indicated otherwise]

Class Psilopsida

Order Psilotales

Family Psilotaceae (1/2)

Psilotum complanatum Sw. Epiphytic herb; moist pine forest (uncommon), 1650 m; Morne Formon. Judd 3832.

Psilotum nudum (L.) Beauv. Epiphytic or terrestrial herb (or rocks); moist forest on limestone (uncommon), ca. 1000 m; Bois Formon. Judd 3493.

Class Lycopsida

Order Lycopodiales

Family Lycopodiaceae (1/8)

Lycopodium cernuum L. Terrestrial herb; moist forest on limestone, disturbed areas (occasional/very common), 900-1100 m; Bois Formon. Judd 3627, Skean 1261.

Lycopodium clavatum L. Terrestrial herb; moist pine forest, disturbed open areas (common), 1650-2200 m; Morne Formon. Judd 3628, 4090, Skean 1460.

Lycopodium hippurideum Christ. Terrestrial herb; moist pine forest/cloud forest (occasional), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4063, 4159, Skean 1399.

Lycopodium pithodes Schl. & Cham. Epiphytic herb; moist pine forest (uncommon), 1900-2200 m; south slope of Pic Macaya. Judd 4216, Skean 1426a.

Lycopodium reflexum Lam. Terrestrial herb; moist pine forest, disturbed slopes (occasional), 1100-2200 m; Morne Formon, M. Cavalier. Judd 3629, 4054, 4058a.

Lycopodium verticillatum L.f. Epiphytic herb; moist pine forest/cloud forest (rare), 1800-2070 m; Morne Formon. Judd 3889.

Lycopodium skutchii Maxon. Epiphytic herb; moist pine forest/cloud forest (rare), 1800-2070 m; Morne Formon. Judd 3888.

Lycopodium taxifolium Sw. Epiphytic herb; moist pine forest/cloud forest (occasional), 1500-2150 m; Morne Formon, Ravine du Sud. Judd 3715, 4064, Skean 1351.

Order Selaginellales

Family Selaginellaceae (1/2)

Selaginella leonardii Schmidt. Terrestrial herb; moist forest on limestone (occasional), 950-1500 m; Bois Formon, southern slopes of Morne Formon. Judd 3480a, 3851. Endemic to Hispaniola.

Selaginella plumieri Hieron. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-1780 m; Bois Formon, Ravine du Sud. Judd 3744a, Skean 1201, 1372. Endemic to Hispaniola.

Class Filicopsida

Order Ophioglossales

Family Ophioglossiaceae (1/1)

Ophioglossum palmatum L. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3467, 3532, Skean 1177, 1237.

Order Marattiales

Family Marattiaceae (1/1)

Danaea elliptica J. Smith. Terrestrial herb; moist pine forest/cloud forest (rare), ca. 1750 m; Morne Formon. Judd 3852.

Order Polypodiales

Family Gleicheniaceae (1/2)

Gleichenia bifida (Willd.) Spreng. Scrambling herb; moist pine forest/cloud forest, disturbed open areas (common), 1800-2200 m; Morne Formon. Judd 3861, Skean 1534.

Gleichenia revoluta HBK. Scrambling herb; moist pine forest, disturbed open areas (abundant), 1700-2200 m; Morne Formon. Judd 3892.

Family Hymenophyllaceae (2/7)

Hymenophyllum hirsutum (L.) Sw. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3481.

Hymenophyllum microcarpum Desv. Epiphytic herb; moist forest on limestone (uncommon). 950-1050 m; Bois Formon. Judd 3466.

Hymenophyllum trapezoidale Copel. Epiphytic herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3878b. Det. Dana Griffin, III.

Hymenophyllum urbani Brause. Epiphytic herb; cloud forest/moist pine forest (common), 1800-2200 m; Morne Formon. Judd 3866, Skean 1476.

Trichomanes crispum L. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3522.

Trichomanes holopterum Kunze. Epiphytic herb; moist forest on limestone (occasional), ca. 960 m; Bois Formon. Judd 3998.

Trichomanes rigidum Sw. Epiphytic or terrestrial herb; cloud forest/moist pine forest (common), 1650-1800 m; Morne Formon. Judd 3672.

Family Plagiogyriaceae (1/1)

Plagiogyria semicordata (Presl) Christ. Terrestrial herb; moist pine forest (common), 2300-2340 m; Pic Macaya; reported by Ekman (in field notes) from ca. 2200 m on Morne Formon. Judd 4143, 4163, Skean 1408. Det. Rolla Tryon.

Family Dicksoniaceae (1/1)

Culcita coniifolia (Hook.) Maxon. Terrestrial herb; moist pine forest (common), 2150-2340 m; Pic Macaya; probably also on Morne Formon. Judd 4151, Skean 1403.

Family Lophosoriaceae (1/1)

Lophosoria quadripinnata (Gmel.) C. Chr. Terrestrial herb; moist pine forest, especially disturbed, recently burned areas (very common), 1670-2340 m; Morne Formon, Pic Macaya. Judd 3634, 4149, Skean 1391.

Family Cyatheaceae (3/6)

Alsophila hotteana (C. Chr. & Ekm.) Tryon. Tree fern; moist forest on limestone (common), moist pine forest (occasional), 950-1770 m; Bois Formon, Morne Formon. Judd 3482, 3647, Skean 1321, 1362. Endemic to Massif de la Hotte.

Alsophila minor (D.C. Eaton) Tryon. Tree fern; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3738, 4419, Skean 1447, 1495.

Alsophila woodwardioides (Kaulf.) Conant. Tree fern; moist forest on limestone, (occasional), 1200-1250 m; Bois Formon, hills south of Morne Formon. Judd 3961. This taxon sometimes is treated as Nephelea woodwardioides (Kaulf.) Gastony var. hieronymi (Brause) Gastony.

Cnemidaria horrida (L.) Presl. Tree fern; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3505, Skean 1200.

Cyathea furfuracea Baker. Tree fern; moist forest on limestone, cloud forest (common), 950-1560 m; Bois Formon, Morne Cavalier, lower elevations on southern slopes of Morne Formon. Judd 3519, 4053, Skean 1198, 1575.

Cyathea harrisii Baker. Tree fern; moist pine forest/cloud forest (very common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3737, 4155, Skean 1406, 1446.

Family Pteridaceae (4/6) (The following fern families are sometimes treated as members of one large polymorphic family, the Polypodiaceae sensu lato; pteridologists differ as to how this assemblage should be divided, and the classification of R. M. & A. F. Tryon (1982) is followed here.)

Adiantum pyramidale (L.) Willd. Terrestrial herb, moist forest on limestone (occasional), 950-1260 m; Bois Formon. Judd 3931, Skean 1259.

Adiantum raddianum Presl. Terrestrial herb; moist pine forest/cloud forest (occasional), 1620-1660 m; southern slopes of Morne Formon. Judd 3803.

Adiantum tenerum Sw. Terrestrial herb; moist forest on limestone, pine forest (occasional), ca. 1000 m; Bois Formon, Ravine du Sud. Judd 4111, Skean 1574.

Cheilanthes farinosa (Forsk.) Kaulf. Terrestrial herb; moist pine forest, open rocky ridge (occasional), ca. 2200 m; southern slope of Pic Macaya. Judd 4134.

Pityrogramma tartarea (Cav.) Maxon. Terrestrial herb; pine forest, disturbed slopes (common), 1670-1770 m; Morne Formon. Judd 3622.

Pteris longifolia L. Terrestrial herb; pine forest, especially open rocky areas (very common), 1000-1730 m; Morne Formon, Ravine du Sud. Judd 3793, 4110.

Family Vittariaceae (1/1)

Vittaria moritiziana Mett. Epiphytic herb; moist pine forest/cloud forest (uncommon), 1650-1800 m; Morne Formon. Judd 3756.

Family Dennstaedtiaceae (4/5)

Histiopteris incisa (Thunb.) J. Smith. Terrestrial herb; moist pine forest/cloud forest (very common), 1650-2300 m; Morne Formon, Pic Macaya. Judd 3767, 4154.

Hypolepis hispaniolica Maxon. Vine; moist pine forest/cloud forest (abundant), 1800-2200 m; Morne Formon. Judd 3894. Endemic to Hispaniola.

Odontosoria aculeata (L.) J. Smith. Vine; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon. Judd 3766, Skean 1536.

Odontosoria fumarioides (Sw.) J. Smith. Vine; moist pine forest (occasional), 2300-2340 m; Pic Macaya. Judd 4156.

Pteridium aquilinum (L.) Kuhn. Terrestrial herb; moist pine forest, especially open disturbed slopes (abundant), 1550-2200 m; Morne Formon, M. Cavalier, Pic Macaya. Judd 3620, 4040.

Family Thelypteridaceae (1/8)

Thelypteris asterothrix (Fée) Proctor. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3471. Det. Rolla Tryon.

Thelypteris hispidula (Decne.) Reed. Terrestrial herb; moist pine forest (occasional), 1650-1770 m; south slope of Morne Formon. Judd 3667a. Det. Rolla Tryon.

Thelypteris patens (Sw.) Small. Terrestrial herb; cloud forest, pine forest (occasional), 1000-1780 m; Ravine du Sud (northern slopes of Morne Formon). Judd 4122, Skean 1371. Det. Rolla Tryon.

Thelypteris rufa (Kunze) Proctor. Terrestrial herb; moist pine forest/cloud forest (common), 1560-1770 m; Morne Formon, M. Cavalier. Judd 3646, 4032. Det. Rolla Tryon.

Thelypteris sagittata (Sw.) Proctor. Terrestrial herb; moist forest on limestone (uncommon), ca. 960 m; Bois Formon. Judd 4002. Det. Rolla Tryon.

Thelypteris sancta (L.) Ching. Terrestrial herb; moist forest on limestone (occasional), ca. 975 m; Bois Formon. Skean 1193. Det. Alan R. Smith.

Thelypteris serra (Sw.) St. John ex Small. Terrestrial herb; pine forest (common), 1000-1700 m; Morne Formon, Ravine du Sud. Franz 8, Judd 3796, 4109.

Thelypteris torresiana (Gaud.) Alston. Terrestrial herb; pine forest (occasional), ca. 1000 m; Ravine du Sud. Judd 4121.

Family Dryopteridaceae (8/17)

Ctenitis cheilanthes C. Chr. Terrestrial fern; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3436.

Diplazium centripetale (Baker) Maxon. Terrestrial herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3887.

- Diplazium l'herminieri Hieron. Terrestrial herb; moist pine forest/cloud forest (occasional), 1650-2200 m; Morne Formon. Judd 3734, 4083.
- Diplazium pectinatum (Fée) C. Chr. Terrestrial herb; moist pine forest/cloud forest (common), 1650-2000 m; Morne Formon. Judd 3647, Skean 1543.
- Diplazium plantaginifolium (L.) Urb. Terrestrial herb; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3534, 3996.
- Diplazium unilobum (Poir.) Hieron. Epiphytic or terrestrial herb; moist pine forest/cloud forest (common), 1450-1780 m; Morne Formon, Ravine du Sud. Judd 3647b, Skean 1366. (=? D. semihastatum (Kuntze) C. Chr.)
- Dryopteris denticulata (Sw.) Kuntze. Terrestrial herb; moist pine forest (occasional), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3667b, 4150.
- Dryopteris paleacea (Sw.) Hand.-Mazz. Terrestrial fern; moist pine forest/cloud forest (occasional/common), 1900-2340 m; Morne Formon, Pic Macaya. Judd 4082, 4133, 4153, Skean 1407. Det. Rolla Tryon.
- Elaphoglossum crinitum (L.) Christ. Terrestrial herb; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3536. (=Hymenodium crinitum (L.) Fée)
- Elaphoglossum peltatum (Sw.) Urb. Epiphytic herb; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1650 m; Bois Formon, southern slope of Morne Formon. Judd 3465, 3815.
- Elaphoglossum revolutum (Liebm.) Moore. Epiphyte; cloud forest (occasional), 1450-1780 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1340.
- Elaphoglossum cf. sellowianum (Presl) Moore. Terrestrial and epiphytic herb; moist pine forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3521, 3772, 4142.
- Lomariopsis amydrophlebia (Slosson) Holttum. Terrestrial herb; moist forest on limestone (occasional), ca. 1000 m; Bois Formon. Skean 1202.
- Polystichum platyphyllum (Willd.) Presl. Terrestrial herb; moist pine forest/cloud forest (occasional), 1620-1660 m; southern slopes of Morne Formon. Judd 3804. (= P. polystichiforme (Fée) Maxon)
- Polystichum triangulatum (L.) Fée. Terrestrial or epiphytic herb; moist forest on limestone, moist pine forest/cloud forest, often in open rocky areas (common), 950-2340 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3997, 3999, 4139, Skean 1472. (=P. echinatum (Gmel.) Christ)
- Tectaria hippocrepis (Jacq.) Copel. Terrestrial fern; moist forest on limestone, cloud forest (common), 950-1530 m; Bois Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3446, 3533, Skean 1246, 1353.
- Woodsia montevidensis (Spreng.) Hieron. Terrestrial herb; moist pine forest (occasional), 2300-2340 m; Pic Macaya. Judd 4146.

Family Aspleniaceae (1/3)

Asplenium myriophyllum (Sw.) Presl. Terrestrial fern; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3430, 3606, Skean 1186. Det. Rolla Tryon.

Asplenium praemorsum Sw. Epiphytic herb; moist pine forest (occasional), 1650-1770 m; Morne Formon. Judd 3643a.

Asplenium serra Langsd. & Fisch. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, Ravine du Sud. Judd 3735, Skean 1332.

Family Davalliaceae (1/3)

Nephrolepis multiflora (Roxb.) Jarrett. Terrestrial herb; moist forest on limestone, pine forest, often on rocks (common), 950-1050 m; Bois Formon, Ravine du Sud. Frans 7, Skean 1272.

Nephrolepis pectinata (Willd.) Schot. Terrestrial herb; moist pine forest (occasional), 1430-1675 m; southern slopes of Morne Formon. Skean 1517.

Nephrolepis rivularis (Vahl) Mett. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3535.

Family Blechnaceae (1/5)

Blechnum divergens (Kunze) Mett. Epiphytic herb; cloud forest (common), 1900-2200 m; Morne Formon. Judd 4086.

Blechnum fragile (Liebm.) Morton & Lell. Epiphytic herb; moist pine forest/cloud forest (common), 1600-2200 m; Morne Formon. Skean 1515.

Blechnum occidentale L. Terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, southern slope of Morne Formon. Judd 3540, 3650.

Blechnum tuerckheimii Brause. Terrestrial herb; moist pine forest (common), 2200-2340 m; Pic Macaya. Judd 4144. Endemic to Hispaniola.

Blechnum underwoodianum (Broudh.) C. Chr. Tree fern; moist pine forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3649, 4141, 4166, Skean 1400.

Family Polypodiaceae (7/22)

Campyloneurum angustifolium (Sw.) Fée. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 1000-2340 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3641, 3666, 4152, Skean 1564.

Campyloneurum vexatum Eaton. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, southern slopes of Morne Formon. Judd 3453b, 3445b, 3636a, Skean 1271.

Grammitis apiculata (Klotzsch) Seymour. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3523a, Skean 1187. Endemic to the Massif de la Selle and Massif de la Hotte?

Grammitis cretata Maxon. Epiphytic herb; Cloud forest (occasional), 1700-1800 m (to as low as 1500 m, Ekman field notes); Morne Formon. Judd 3600, Skean 1375.

- Grammitis cultrata (Willd.) Proctor. Epiphytic herb; moist pine forest/cloud forest (occasional), 1800-2200 m; Morne Formon. Judd 3883, Skean 1471.
- Grammitis firma (J. Smith) Morton. Epiphytic herb; moist pine forest (uncommon), 2000-2340 m; Pic Macaya. Judd 4162.
- Grammitis furcata Hk. & Grev. Epiphytic herb; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3480b.
- Grammitis marginella (Sw.) Sw. Epiphytic herb; moist pine forest/cloud forest (rare), 1900-2300 m; Pic Macaya (to "The Saddle" connecting this peak with Morne Formon). Judd 4129.
- Grammitis moniliformis (Sw.) Proctor. Epiphytic herb; moist pine forest (occasional), 2250-2340 m; Pic Macaya. Judd 4161, Skean 1405. Det. Rolla Tryon.
- Grammitis pendula (Sw.) Proctor. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3523b, Skean 1188. Det. Rolla Tryon.
- Microgramma lycopodioides (L.) Copel. Epiphytic herb; moist forest on limestone, moist pine forest (common), 950-1050 m; Bois Formon, Ravine du Sud. Judd 3445a, 3447a, 4119, Skean 1236.
- Microgramma piloselloides (L.) Copel. Epiphytic or terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3447b, 4009, Skean 1230.
- Neuroodium lanceolatum (L.) Fée. Terrestrial herb; moist pine forest, rocky ledges (common), ca. 1000 m; Ravine du Sud. Judd 4112.
- Niphidium crassifolium (L.) Lell. Epiphytic or terrestrial herb; moist forest on limestone, often in disturbed open areas, open rocky pine forest (common), 950-1730 m; Bois Formon, southern slope of Morne Formon, Ravine du Sud. Judd 3670, 3792, 4118, Skean 1235.
- Pleopeltis macrocarpa (Cav.) Maxon. Epiphytic herb; moist pine forest (common), 1650-1770 m; Morne Formon. Judd 3636b.
- Polypodium aureum L. Epiphytic or terrestrial herb; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3940, Skean 1154.
- Polypodium dissimile L. Terrestrial herb; moist forest on limestone (uncommon), ca. 960 m; Bois Formon. Judd 4001.
- Polypodium lasiopus Klotzsch. Terrestrial or epiphytic herb; moist pine forest (rare), ca. 1800 m; Morne Formon. Judd 3714.
- Polypodium loricatum L. Usually epiphytic herb; moist pine forest, often disturbed areas (occasional/common), 1430-2340 m; Morne Formon, Pic Macaya. Judd 3638, 4164, Skean 1513.
- Polypodium pectinatum L. Terrestrial herb; moist forest on limestone (occasional), ca. 1000 m; Bois Formon. Skean 1280.

Polypodium polypodioides (L.) Watt. Epiphytic or terrestrial herb; moist forest on limestone, often in disturbed areas, pine forest (occasional), 950-1260 m; Bois Formon, Ravine du Sud. Judd 4024, 4115, Skean 1299.

Polypodium squamatum L. Epiphytic or terrestrial herb; moist forest on limestone, disturbed open areas, pine forest (occasional), 950-1260 m; Bois Formon, Ravine du Sud. Judd 3456, 3930, 4114.

Class Coniferopsida

Order Coniferales

Family Pinaceae (1/1)

Pinus occidentalis Sw. Tree; dominant tree forming pinelands, or scattered overstory tree in cloud forest (abundant), 1000-2340 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3632, 3993, Skean 1458. Endemic to Hispaniola.

Class Angiospermopsida

Superorder Annoniflorae

Order Annonales

Family Illiciaceae (1/1)

Illicium ekmanii A. C. Smitn. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1560 m; Bois Formon, Morne Cavalier. Judd 4038, Skean 1194, 1260, 1313, 1662. Endemic to Hispaniola.

Family Chloranthaceae (1/1)

Hedyosmum nutans Sw. Shrub; moist forest on limestone, disturbed area (occasional), ca. 974 m; Bois Formon. Skean 1501.

Family Lauraceae (5/7)

Beilschmiedia pendula (Sw.) Hemsl. Tree; moist forest on limestone, pine forest (common), 930-1250 m; Bois Formon, Ravine du Sud. Judd 3524, 3526, 3936.

Cinnamomum cf. montanum (Sw.) Bercht. & Presl. Tree; moist forest on limestone (common), 930-1050 m; Bois Formon. Judd 3946, Skean 1283.

Nectandra coriacea (Sw.) Griseb. Tree; moist forest on limestone (occasional), 950-1000 m; Bois Formon. Skean 1294.

Nectandra membranacea (Sw.) Griseb. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1143.

Ocotea foeniculacea Mez. Tree; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3891, 3896.

Persea americana Mill. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Introduced. Judd 3957.

Persea anomala Britt. & Wils. Tree; moist pine forest/cloud forest (common), 1500-2200 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3727, 3867, Skean 1432, 1527, 1537, (=Persea ekmanii O. C. Schmidt)

Family Piperaceae (3/19)

- Lepianthes umbellatum (L.) Raf. Shrub; moist forest on limestone, especially disturbed openings (very common), 930-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3951, Skean 1163.
(=Pothomorphe umbellata (L.) Miq.)
- Peperomia acuminata Ruiz & Pav. Terrestrial or epiphytic herb; moist pine forest/cloud forest (common), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3663, 4127, Skean 1401.
- Peperomia alata Ruiz & Pav. Terrestrial or epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 4000, Skean 1276.
- Peperomia distachya (L.) Dietr. Epiphytic or terrestrial herb; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3443, 3456, Skean 1192.
- Peperomia dominicana DC. Terrestrial herb; pine forest (occasional), ca. 1000 m; Ravine du Sud. Thompson s.n. 6 Feb. 1984. Endemic to Hispaniola.
- Peperomia galoides HBK. Epiphytic herb; moist pine forest/cloud forest (rare), 1650-1800 m; Morne Formon. Judd 3760.
- Peperomia glabella (Sw.) Dietr. Epiphytic or terrestrial herb; moist pine forest/cloud forest (common), 1500-1770 m; Morne Formon, Ravine du Sud. Judd 3662, Skean 1377.
- Peperomia hernandifolia (Vahl) Dietr. Terrestrial or epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3473.
- Peperomia hispidula (Sw.) Dietr. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3470.
- Peperomia magnoliifolia (Jacq.) Dietr. var. microphylla Dahlst. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3476.
- Peperomia michelensis Trel. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3444, Skean 1270. Endemic to Massif de la Hotte.
- Peperomia obtusifolia (L.) Dietr. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest (common), 1200-2070 m; Bois Formon, Morne Formon. Judd 3880, 3967.
- Peperomia tenella (Sw.) Dietr. Epiphytic or terrestrial herb; moist forest on limestone, moist pine forest (common), 950-1770 m; Bois Formon, Morne Formon. Judd 3654, Skean 1162.
- Peperomia tetraphylla (S. Forst.) Hook. & Arn.. Epiphytic herb; moist pine forest/cloud forest (occasional), 1650-1800 m; Morne Formon. Judd 3656, 3759.
- Piper aduncum L. Shrub; moist forest on limestone, pine forest (common), 950-1250 m; Bois Formon, Ravine du Sud. Franz 4, Judd 4003.
- Piper confusum DC. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3438.

- Piper hispidum Sw. Shrub; moist forest on limestone (common), moist pine forest (uncommon), 950-1670 m; Bois Formon, southern slope of Morne Formon, M. Cavalier. Judd 3665, 3948, Skean 1155, 1189.
- Piper rugosum Lam. Small tree; moist pine forest/cloud forest (common), 1620-1660 m; southern slope of Morne Formon. Judd 3805.
- Piper oviedoi Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1204, 1243. Endemic to Massif de la Hotte and Massif de la Selle.

Order Berberidales

Family Menispermaceae (1/1)

- Cissampelos pareira L. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 930-1800 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3947, Skean 1333.

Family Ranunculaceae (2/2)

- Clematis dioica L. Vine; moist pine forest (occasional), 1650-1700 m; southern slope of Morne Formon. Judd 3835.

- Ranunculus recurvatus Poir. var. tropicus (Griseb.) Fawc. & Rendle. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1800-2340 m; Morne Formon, Pic Macaya. Skean 1396, 1541.

Family Papaveraceae (1/1)

- Bocconia frutescens L. Shrub; moist forest on limestone, moist pine forest/cloud forest, especially disturbed openings (very common), 950-2300 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3537, Skean 1360.

Superorder Chenopodiiflorae

Order Chenopodiales

Family Phytolaccaceae (1/1)

- Phytolacca rivinoides Kunth & Bouché. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest, clearings (occasional/common), 950-1650 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3660, Skean 1150.

Family Caryophyllaceae (2/2)

- Cerastium glomeratum Thuill. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest, open disturbed areas (common), 950-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 4048.

- Stellaria media (L.) Vill. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), 950-1300 m; Bois Formon, southern slopes of Morne Formon. Introduced. Judd 3918.

Family Nyctaginaceae (1/1)

Pisonia aculeata L. Scrambling shrub; moist forest on limestone, especially open areas (uncommon), 900-1000 m; Bois Formon. Skean 1296.

Family Amaranthaceae (1/1)

Chamisca altissima (Jacq.) HBK. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), 950-1250 m; Bois Formon. Judd 3976.

Family Cactaceae (1/1)

Rhipsalis baccifera (Soland. ex J. Mill) Stearn. Epiphytic herb; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3988, Skean 1576a.

Superorder Theiflorae

Order Theales

Family Theaceae (2/2)

Cleyera ternstroemoides (O. E. Schmidt) Kobuski. Tree/shrub; moist pine forest/cloud forest (occasional), 1620-2200 m; Morne Formon. Judd 3818. Endemic to Massif de la Hotte (Morne Formon).

Ternstroemia barkeri Ekm. & Schmidt. Shrub to small tree; moist pine forest/cloud forest (common), 1900-2200 m; Morne Formon, "The Saddle" between M. Formon and Pic Macaya. Judd 4087, Skean 1477, 1668. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).

Family Symplocaceae (1/1)

Symplocos hotteana Urb. & Ekm. Small tree; moist pine forest/cloud forest (occasional), 1650-2200 m; Morne Formon. Judd 3854, Skean 1670. Endemic to Massif de la Hotte (Morne Formon).

Family Aquifoliaceae (1/2)

Ilex macfadyenii (Walp.) Rehder. Shrub to small tree; moist pine forest/cloud forest (common), 1800-2300 m; Morne Formon, Pic Macaya. Judd 3865, 4124, Skean 1390, 1433.

Ilex obcordata Sw. Shrub to small tree; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon, Pic Macaya. Judd 3862, 4080, Skean 1444, 1540.

Family Marcgraviaceae (1/2)

Marcgravia oligandra Wr. ex Griseb. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3478.

Marcgravia rectiflora Triana & Planch. Vine; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Not collected.

Family Clusiaceae or Guttiferae (2/3)

Clusia clusioides (Griseb.) D'Arcy. Epiphytic or terrestrial shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3497, Skean 1229.

Clusia major L. Tree; moist forest on limestone (occasional), 930-960 m; Bois Formon. Judd 3958.

Rheedia barkeriana Urb. & Ekm. Shrub; moist forest on limestone (occasional), 950-1050 m (-1500 m, Ekman field notes); Bois Formon, southern slopes of Morne

Formon. Judd 3464. Endemic to Massif de la Hotte (Formon region).

Order Ericales

Family Ericaceae (4/4)

Gaultheria domingensis Urb. Shrub; moist pine forest (uncommon), 2100-2200 m; ridge leading to peak on southern slope of Pic Macaya. Judd 4123, Skean 1434.

Lyonia rubiginosa (Pers.) G. Don var. costata (Urb.) Judd. Tree to shrub; moist pine forest/cloud forest (occasional), 1450-1800 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3754, Skean 1344. Endemic to Hispaniola.

Sphyrospermum majus Griseb. Epiphytic shrub; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3455, 3529, 3711, 3770, 3834, 3913, 3984, 4051, 4137, Skean 1305, 1449. Extremely variable: leaves acuminate to rounded at apex, flowers white to pink, ovary glabrous to pubescent.

Vaccinium racemosum (Vahl) Wilbur & Luteyn. Scrambling shrub/vine; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3472, 3886, 4131, Skean 1181, 1184, 1435, 1673. (= Sympphia racemosa (Vahl) Stearn; the generic placement of this taxon is in doubt.)

Order Ebenales

Family Sapotaceae (3/3)

Chrysophyllum argenteum Jacq. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3509, 4016, Skean 1141.

Dipholis cubensis (Griseb.) Pierre. Shrub; moist forest on limestone, moist pine forest/cloud forest (common), 1200-1800 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3819, 3979, Skean 1338.

Micropholis polita (Griseb.) Pierre. Tree; moist forest on limestone (common), 950-1250 m; Bois Formon. Judd 3435, 3927.

Order Primulales

Family Theophrastaceae (1/1)

Jacquinia eggersii Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3501.

Family Myrsinaceae (3/6)

Ardisia fuertesii Urb. Shrub; moist forest on limestone, cloud forest (common), 950-1660 m; Bois Formon, Morne Formon. Judd 3498, 3816, Skean 1290.

Myrsine coriacea (Sw.) R. Br. ex Roem. & Schult. Shrub to tree; moist forest on limestone (uncommon), moist pine forest/cloud forest (very common), 950-2300 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3630, 3885, 4022b, 4037, 4147, Skean 1394, 1654.

Myrsine magnoliifolia (Urb. & Ekm.) Alain. Small tree; moist pine forest/cloud forest (uncommon), 1900-2200 m; Morne Formon. Skean 1475, 1676. Endemic to Massif de la Hotte (Morne Formon).

Wallenia aquifolia Urb. & Ekm. Shrub; moist pine forest (occasional), 2100-2300 m; ridge on southern slope of Pic Macaya; Ekman also reports (in field notes) from elevations as low as 1550 m on Morne Formon. Judd 4128, Skean 1388. Endemic to Massif de la Hotte and Massif de la Selle.

Wallenia ekmanii Urb. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1578. Endemic to Massif de la Hotte.

Wallenia sp. nov. A. (close to W. urbaniana Mez). Tree; moist pine forest/cloud forest (occasional), ca. 1520 m; southern slopes of Morne Formon. Skean 1524. Endemic to Massif de la Hotte (Morne Formon).

Order Polygonales

Family Polygonaceae (1/2)

Coccoloba costata Wr. ex Sauv. Shrub to tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3499, Skean 1178.

Coccoloba pauciflora Urb. Shrub to small tree; moist pine forest/cloud forest (occasional), 1530-1650 m; Morne Cavalier. Judd 4027. Endemic to Hispaniola.

Superorder Celastriflorae

Order Celastrales

Family Celastraceae (1/1)

Maytenus cf. hotteana Urb. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3465a. Endemic to Massif de la Hotte.

Superorder Santaliflorae

Order Santalales

Family Loranthaceae (1/1)

Dendropemon parvifolius (Sw.) Steud. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 1450-1650 m; southern slopes of Morne Formon, M. Cavalier. Judd 3831, 4057.

Family Viscaceae (2/7)

Dendrophthora brachystacha Urb. Epiphytic and parasitic shrub; moist pine forest (common), 1650-1800 m; Morne Formon. Judd 3645. Endemic to Hispaniola.

Dendrophthora carnosa Urb. & Ekm. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 1650-2200 m; Morne Formon, "The Saddle" to Pic Macaya. Judd 3621, 3757, 4095, Skean 1459, 1666b. Endemic to the Massif de la Hotte (Morne Formon, Pic Macaya).

Dendrophthora cupressoides (Macf.) Eichl. Epiphytic and parasitic shrub; moist pine forest/cloud forest (occasional), 1530-1560 m; Morne Cavalier. Judd 4056.

Dendrophthora serpyllifolia (Griseb.) Krug & Urb. Epiphytic and parasitic shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3468, 3516.

Dendrophthora versicolor Urb. & Ekm. Epiphytic and parasitic shrub; moist pine forest/cloud forest (common), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4091, Skean 1397. Endemic to Massif de la Hotte (M. Formon/Pic Macaya region).

Phoradendron anceps (Spreng.) Krug & Urb. Epiphytic and parasitic shrub; moist forest on limestone (occasional), 1200-1250 m; Bois Formon. Judd 3989.

Phoradendron piperoides (HBK.) Trel. Epiphytic and parasitic shrub; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3938.

Superorder Violiflorae

Order Violales

Family Flacourtiaceae (4/4)

Banara splendens Urb. Tree; moist pine forest/cloud forest (common), 1400-1650 m; southern slopes of Morne Formon. Judd 3830, Skean 1508. Endemic to Hispaniola. (= B. hotteana Urb. & Ekm.)

Casearia sylvestris Sw. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1145a, 1282.

Lunania mauritii Urb. Shrub; moist forest on limestone (common), 950-1250 m; Bois Formon. Judd 3461, 3507, 3977. Endemic to Hispaniola.

Samyda dodecandra Jacq. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1262.

Family Passifloraceae (1/2)

Passiflora murucuja L. Vine; moist pine forest/cloud forest (uncommon), 1370-1650 m; Morne Formon, M. Cavalier. Skean 1502.

Passiflora sexflora Juss. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 930-1650 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 4030, 4120, Skean 1245.

Family Cucurbitaceae (1/1)

Cayaponia americana (Lam.) Cogn. Vine; moist forest on limestone, disturbed openings (common), 950-1250 m; Bois Formon. Judd 3981.

Family Begoniaceae (1/2)

Begonia plumieri DC. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, Ravine du Sud. Judd 3791. Endemic to Hispaniola.

Begonia pycnantha Urb. & Ekm. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3528, Skean 1252. Endemic to Hispaniola.

Order Capparales

Family Brassicaceae or Cruciferae (2/2)

Brassica campestris L. Terrestrial herb; disturbed clearings and fields (common), ca. 1600-1750 m; Morne Formon. Not collected. Introduced.

Lepidium virginicum L. Terrestrial herb; disturbed clearings and fields (common), ca. 1650 m; Morne Formon. Not collected.

Superorder Malviflorae

Order Malvales

Family Tiliaceae (1/1)

Trumfetta semitriloba Jacq. Terrestrial herb; disturbed openings (common), 950-1050 m; Bois Formon. Not collected.

Family Bombacaceae (1/1)

Bombax emarginatum (A. Rich.) A. Robyns. Tree; moist forest on limestone (uncommon), ca. 1000 m; Bois Formon. Skean 1308.

Family Malvaceae (4/5)

Anoda hastata Cav. Terrestrial herb; moist forest on limestone, disturbed openings (uncommon), 950-1050 m; Bois Formon. Skean 1312.

Hibiscus tiliaceus L. Tree; moist forest on limestone (uncommon), 950-1000 m; Bois Formon. Judd 3952, Skean 1277. Probably persisting after cultivation.

Sida acuta Burm. f. Terrestrial herb; moist forest on limestone, disturbed openings and fields (common), 900-1200 m; Bois Formon. Not collected.

Sida rhombifolia L. Terrestrial herb; moist forest on limestone, disturbed openings and fields (occasional), 900-1050 m; Bois Formon. Not Collected.

Urena lobata L. Terrestrial herb or subshrub; moist forest on limestone, disturbed openings and fields (common), 950-1250 m; Bois Formon. Not collected.

Order Urticales

Family Ulmaceae (1/2)

Trema lamarkiana (R. & Sch.) Blume. Tree; pine forest (occasional), ca. 1000 m; Ravine du Sud. Judd 4105.

Trema micrantha (L.) Blume. Tree; moist pine forest/cloud forest (occasional/common), 1450-1850 m; Morne Formon, M. Cavalier, Ravine du Sud. Judd 3769, 4047, Skean 1334.

Family Urticaceae (including Moraceae, Cecropiaceae) (5/19)

Cecropia peltata L. Tree; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3973, Skean 1565.

Ficus citrifolia Mill. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3490.

Ficus suffocans Griseb. Tree; pine forest (uncommon), ca. 1000 m; Ravine du Sud. Judd 4102.

Gyrotaenia myriocarpa Griseb. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (occasional/common), 1200-1800 m; Bois Formon, southern slopes of Morne Formon, Ravine du Sud. Judd 3633, 4104, Skean 1505, 1525.

- Pilea baltenweckii Urb. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-1700 m; Bois Formon, southern slopes of Morne Formon. Skean 1175, 1514. Endemic to Hispaniola.
- Pilea distantifolia Urb. Terrestrial herb; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3440, Skean 1176, 1182, 1249. Endemic to Massif de la Hotte.
- Pilea domingensis Urb. Terrestrial herb; moist forest on limestone, cloud forest (occasional), 950-2200 m; Bois Formon, Morne Formon. Judd 3504, Skean 1278, 1474. Endemic to Hispaniola.
- Pilea formonensis Urb. & Ekm. Terrestrial herb; moist pine forest/cloud forest (common), 1700-2200 m; Morne Formon, Ravine du Sud, southern slope of Pic Macaya. Judd 3644, Skean 1348, 1448. Endemic to Massif de la Hotte (high elevations).
- Pilea hepatica Urb. & Ekm. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3494. Endemic to Massif de la Hotte and Massif de la Selle.
- Pilea leptocardia Urb. Terrestrial herb; moist pine forest/cloud forest (common), 1450-1800 m; Morne Formon, M. Cavalier, Ravine du Sud. Judd 4050, Skean 1336. Endemic to Massif de la Hotte and Massif de la Selle.
- Pilea microphylla (L.) Liebm. Terrestrial herb; moist pine forest, especially open rocky areas (very common), 1650-2200 m; Morne Formon, southern slope of Pic Macaya. Judd 3742, 4140.
- Pilea parietaria (L.) Blume. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1250.
- Pilea serpyllacea (HBK.) Liebm. Terrestrial herb; moist pine forest/cloud forest (common), 1530-1750 m; Morne Formon, M. Cavalier. Judd 4049. Endemic to Massif de la Hotte.
- Pilea stolonifera (Sw.) Wedd. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1196, 1251. Endemic to Massif de la Hotte and Massif de la Selle.
- Pilea cf. torbeciana Urb. & Ekm. Terrestrial herb; moist forest on limestone (uncommon), 950-1200 m; Bois Formon. Skean 1248. Endemic to Massif de la Hotte.
- Pilea sp. 1. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3531, Skean 1185, 1199.

Pilea sp. 5. Terrestrial herb; moist pine forest, especially open rocky areas (common), 1500-1770 m; southern slopes of Morne Formon. Judd 3624, Skean 1530.

Pilea sp. 12. Terrestrial herb; moist forest on limestone (uncommon), ca. 975 m; Bois Formon. Skean 1500. Urera baccifera (L.) Wedd. Subshrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3953.

Order Euphorbiales

Family Euphorbiaceae (6/6)

Alchornea latifolia Sw. Tree; moist forest on limestone (common), 930-1370 m; Bois Formon. Judd 4008, 4055, Skean 1264, 1570.

Croton glabellus L. moist forest on limestone, moist pine forest/cloud forest (uncommon), 1000-1780 m; Bois Formon, Morne Formon, Ravine du Sud. Skean 1329, 1569.

Gymnanthes lucida Sw. Shrub to tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3503, Skean 1304.

Heronima domingensis Urb. Small tree; moist forest on limestone, disturbed area (uncommon), 910-940 m; Bois Formon. Skean 1322. Endemic to Massif de la Selle and Massif de la Hotte. Det. Grady L. Webster.

Phyllanthus myriophyllum Urb. Shrub; moist forest on limestone (very common), 950-1250 m; Bois Formon. Judd 3459, 3987, Skean 1133, 1653. Endemic to Massif de la Hotte.

Sapium haitiense Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest (uncommon/occasional), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 4043, Skean 1241. Endemic to Massif de la Hotte.

Family Thymeliaceae (1/2)

Daphnopsis americana (Mill.) Johnston subsp. tinifolia (Sw.) Nevl. Shrub to tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3956.

Daphnopsis crassifolia (Poir.) Meissn. Shrub; moist pine forest/cloud forest (common), 1500-1660 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3801, 4028, Skean 1355. Endemic to Hispaniola.

Superorder Geraniiflorae

Order Geriales

Family Oxalidaceae (1/1)

Oxalis corniculata L. Terrestrial herb; moist pine forest, disturbed openings (occasional), 1800-2100 m; Morne Formon. Judd 3881.

Family Malpighiaceae (3/4)

Byrsinima lucida (Mill.) DC. moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3619. Det. William R. Anderson.

Stigmaphyllo angulosum (L.) A. Juss. Vine; moist forest on limestone (occasional/common), 950-1050 m; Bois Formon. Judd 3462, Skean 1153.

Stigmaphyllo lingulatum (Poir.) Small. Vine; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3963.

Tetrapterys citrifolia (Sw.) Pers. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1555. Det. William R. Anderson.

Family Polygalaceae (2/2)
Polygala penaea L. Shrub to small tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 4006.

Securidaca virgata Sw. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1171a.

Superorder Rutiflorae

Family Rutaceae (3/4)

Amyris apiculata Urb. & Ekm. Shrub to small tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3434. Endemic to Massif de la Hotte (Formon region).

Citrus aurantium L. Tree; moist forest on limestone, moist pine forest/cloud forest (uncommon), 950-1550 m; Bois Formon, Morne Cavalier. Not collected. Introduced.

Zanthoxylum haitense (Urb.) Jiménez. Shrub; moist forest on limestone (rare), 1200-1250 m; Bois Formon. Judd 3969. Endemic to the Massif de la Hotte. Det. T. Zanoni.

Zanthoxylum martinicense (Lam.) DC. Small tree; moist forest on limestone (occasional), 950-1100 m; Bois Formon. Judd 4005.

Family Meliaceae (2/2)

Guarea guidonia (L.) Sleumer. Tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1225.

Trichilia havanensis Jacq. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (common), 1200-1780 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3659, 3985, Skean 1324, 1512.

Family Anacardiaceae (1/1)

Comocladia pinnatifolia L. Tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1567.

Family Myricaceae (1/1)

Myrica picardae Krug & Urb. Shrub; moist pine forest/cloud forest, especially windswept ridges (occasional), 2100-2250 m; Morne Formon, Pic Macaya. Judd 4089, 4136. Endemic to Hispaniola.

Family Sapindaceae (3/3)

Allophylus rigidus Sw. Shrub; moist forest on limestone, moist pine forest (very common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 4019.

Cupania americana L. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3511, Skean 1571.

Serjania polyphylla (L.) Radlk. Vine; moist forest on limestone (common), 930-1050 m; Bois Formon. Judd 3945.

Family Sabiaceae (1/2)

Meliosma abbreviata Urb. Tree; moist pine forest/cloud forest (uncommon), 1650-1800 m; Morne Formon. Judd 3753b. Endemic to Massif de la Hotte.

Meliosma recurvata Urb. Shrub to small tree; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3512. Endemic to Massif de la Hotte.

Family Leguminosae or Fabaceae (5/5)

Desmodium axillare (Sw.) DC. Terrestrial herb; moist forest on limestone, open disturbed areas (common), 950-1050 m; Bois Formon. Skean 1573.

Inga vera Willd. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3959.

Pithecellobium oppositifolium Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 1140-1560 m; Morne Cavalier and hills to the south. Judd 4026, Skean 1653b.

Rhynchosia erythrinoides Schlecht. & Cham. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1302.

Senna ligustrina (L.) Irwin & Barneby. Shrub; moist pine forest (common), ca. 1000 m; Ravine du Sud. Judd 4117.

Superorder Rosales

Order Rosales

Family Rosaceae (2/4)

Prunus myrtifolia (L.) Urb. Tree; moist forest on limestone (very common), 930-1250 m; Bois Formon, Ravine du Sud. Judd 3449, 3929, 3943, 3962, Skean 1263, 1554.

Prunus occidentalis Sw. Tree; moist forest on limestone, moist pine forest/cloud forest (common), 930-1660 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3510b, 3652, 3814, 3937, 3982, 4052.

Rubus eggersii Rydb. Terrestrial herb; moist pine forest/cloud forest (abundant), 1530-2100 m; Morne Formon, M. Cavalier. Judd 3762b, 4029. Endemic to Hispaniola. The similar Rubus barkerianus is probably also present but overlooked.

Rubus sellleanus Helwig. Terrestrial herb; moist pine forest/cloud forest (abundant), 1650-2300 m; Morne Formon, Pic Macaya. Judd 3762a, Skean 1426b, 1671. Endemic to Massif de la Hotte and Massif de la Selle.

Family Crassulaceae (1/1)

Kalanchoe pinnata (Lam.) Pers. Terrestrial herb; disturbed open areas, 950-1200 m, Bois Formon. Not collected.

Family Cunoniaceae (1/1)

Weinmannia pinnata L. Shrub to tree; moist forest on limestone (occasional), moist pine forest/cloud forest

(abundant); 1000-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3518, 3639, Skean 1425.

Family Brunelliaceae (1/1)

Brunellia comocladiifolia Humb. & Bonpl. subsp. domingensis Cuatr. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (abundant), 950-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3623, 4004, 4067, 4132, Skean 1507.

Family Staphyleaceae (1/1)

Turpinia picardae Urb. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 4021, Skean 1273, 1528, 1659. Endemic to Massif de la Hotte and Massif de la Selle.

Superorder Myrtiflorae

Order Mytales

Family Melastomataceae (10/34)

Calycogonium apiculatum Urb. & Ekm. Shrub to tree; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3441. Endemic to Massif de la Hotte.

Calycogonium cf. calycopteris (L. C. Rich.) Urb. Shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3442, Skean 1247. Endemic to Hispaniola.

Calycogonium torbecianum Urb. & Ekm. Shrub; moist forest on limestone (uncommon), 1000-1450 m; Bois Formon, southern slopes of Morne Formon. Judd 3934b, Skean 1140. Endemic to Massif de la Hotte (Formon region).

Conostegia subhirsuta DC. Shrub; moist forest on limestone (occasional), ca. 900 m; Bois Formon. Skean 1577.

Ekmaniocharis crassinervis Urb. Shrub to small tree; moist forest on limestone (uncommon), 905 m; between Les Platons and Soubois. Skean 1660, 1665, 1642. Endemic to Massif de la Hotte.

Henriettea barkeri Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (occasional), 1800-2200 m; Morne Formon. Judd 3890, Skean 1463. Endemic to Massif de la Selle and Massif de la Hotte; conspecific with H. elliptica Urb.

Heterotrichum angustifolium DC. Shrub; moist forest on limestone, pine forest (occasional/common), 950-1000 m; Bois Formon, Ravine du Sud. Frans 3, Judd 4103, Skean 1563.

Heterotrichum umbellatum (Mill.) Urb. Shrub to small tree; moist forest on limestone (occasional), moist pine forest/cloud forest, especially disturbed openings (common), 1500-1800 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3626, 4036, Skean 1256.

Mecranium amygdalinum (Desr.) C. Wr. Shrub to small tree; moist pine forest/cloud forest (uncommon), 1500-1800 m; Morne Formon, M. Cavalier. Judd 3713, 4035.

Mecranium microdictyum Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (occasional/common), 1450-1780 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud (northern slope of M. Formon). Judd 3795, 4033, Skean 1335, 1376, 1523. Endemic to Massif de la Hotte.

Mecranium salicifolium Urb. Shrub to tree; moist forest on limestone (occasional), 950-1450 m; Bois Formon, lower southern slopes of Morne Formon. Judd 3932, Skean 1258, 1288, 1553, 1557, 1651, 1661. Endemic to Massif de la Hotte (Formon region); possibly conspecific with M. haitiense Urb., also endemic to the Massif de la Hotte.

Mecranium tricostatum Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (rare), 2100 m; Morne Formon. Skean 1666a, 1667. Endemic to Massif de la Hotte. A second small-leaved species, M. alpestre Urb., was collected on Morne Formon by E. Ekman; this taxon is known only from the type gathering.

Mecranium tuberculatum Urb. Shrub; moist pine forest/cloud forest (uncommon), 1800-2200 m; Morne Formon. Skean 1542. Endemic to Massif de la Hotte and Massif de la Selle.

Mecranium sp. nov. A. Shrub to tree; moist forest on limestone (common), cloud forest (uncommon), 950-1600 m; Bois Formon, southern slope of Morne Formon, Ravine du Sud. Judd 3433, 3934, 3971, Skean 1257, 1315, 1316, 1328, 1350, 1558, 1644, 1649. Endemic to Massif de la Hotte (Formon region).

Meriania squamulosa Urb. & Ekm. Shrub; moist pine forest/cloud forest (uncommon), 1800-2200 m; Morne Formon. Skean 1466. Endemic to Massif de la Hotte (Morne Formon).

Meriania sp. nov. A. Shrub; moist pine forest/cloud forest (uncommon), 1450-1800 m; Ravine du Sud (northern slopes of Morne Formon). Judd 3755, Skean 1325. Endemic to Massif de la Hotte (Morne Formon).

Meriania sp. nov. B. Shrub; moist forest on limestone (uncommon), ca. 1000 m; Bois Formon. Skean 1287. Endemic to Massif de la Hotte; close to M. purpurea (Sw.) Sw. of Jamaica. Endemic to Massif de la Hotte (Formon region).

Miconia apiculata Urb. & Ekm. Tree; moist pine forest/cloud forest (occasional/very common), 2100-2340 m; Morne Formon, Pic Macaya. Judd 4062, 4126, Skean 1398. Endemic to Massif de la Hotte (high elevations).

Miconia barkeri Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon. Judd 3758, 3868, Skean 1457. Endemic to Massif de la Hotte (Morne Formon).

Miconia hypoides Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (common), 1800-2340 m; Morne Formon, Pic Macaya. Judd 3856, 4065, 4081, 4148, Skean

1386, 1464. Endemic to Massif de la Hotte (high elevations).

Miconia laevigata (L.) DC. Shrub; moist forest on limestone (occasional/common), 900-1000 m; Bois Formon. Skean 1275, 1556, 1647.

Miconia mirabilis (Aubl.) L. O. Williams. Shrub; moist forest on limestone (rare), ca. 900 m; Bois Formon. Skean 1561.

Miconia ossaeifolia Urb. & Ekm. Shrub; moist pine forest/cloud forest (occasional), 1360-1780 m; Morne Formon, Ravine du Sud. Skean 1327, 1352, 1498. Endemic to Massif de la Hotte.

Miconia subcompressa Urb. & Ekm. Shrub; moist forest on limestone (abundant), moist pine forest/cloud forest (occasional/common), 950-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3460, 3669, 3758b, 3933, 4034, 4044, Skean 1145b, 1652. Endemic to Hispaniola.

Miconia tetrastoma Naud. Shrub; moist pine forest/cloud forest (occasional/common), 1450-2200 m; Morne Formon, M. Cavalier, Ravine du Sud (northern slopes of M. Formon). Judd 3741, 4025, Skean 1346, 1379, 1470, 1538, 1677.

Miconia xenotricha Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1400-1780 m; Ravine du Sud (northern slopes of M. Formon). Skean 1326. Endemic to Massif de la Hotte and Massif de la Selle.

Miconia sp. nov. A. Shrub; moist pine forest, rocky ridges (uncommon), ca. 2200 m; southern slope of Pic Macaya. Judd 4125, Skean 1428. Endemic to Massif de la Hotte (southern slope of Pic Macaya).

Miconia sp. l. Shrub; cloud forest (uncommon), 1450-1780 m; Ravine du Sud. Skean 1347.

Ossaea curvipila Urb. & Ekm. Shrub; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3469. Endemic to Massif de la Hotte (Formon region).

Ossaea setulosa Urb. Shrub; moist forest on limestone (common), 900-1050 m; Bois Formon. Judd 3527, Skean 1231, 1320. Endemic to Massif de la Hotte.

Ossaea sp. nov. A. Shrub; moist pine forest/cloud forest (occasional), 1450-1780 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon). Judd 3802, Skean 1367. Endemic to Massif de la Hotte (Morne Formon).

Pachyanthus blancheanus (Urb.) Urb. Shrub; moist pine forest/cloud forest (uncommon), ca. 1800 m; Morne Formon. Judd 3758c. Endemic to Massif de la Hotte.

Pachyanthus hotteana (Urb. & Ekm.) Ekm. Tree; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3939. Endemic to Hispaniola?

Tibouchina longifolia (Vahl) Baill. Shrub; moist forest on limestone, open disturbed areas (abundant), 900-1600 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3949, Skean 1503.

Family Onagraceae (1/1)

Fuchsia pringsheimii Urb. Shrub; moist pine forest/cloud forest (common), 1450-2340 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon), Pic Macaya. Judd 3725, 4160, Skean 1363, 1402. Endemic to Hispaniola.

Family Myrtaceae (6/11)

Calyptranthes hotteana Urb. & Ekm. Tree; moist pine forest/cloud forest (common), 1800-2200 m; Morne Formon. Judd 3855, 3858, 4088, Skean 1462, 1672. Endemic to Massif de la Hotte (high elevations).

Calyptranthes nummularia Berg. Shrub; moist forest on limestone, moist pine forest/cloud forest (occasional), 1000-1670 m; Bois Formon, southern slopes of Morne Formon. Judd 3806, Skean 1297. Endemic to Massif de la Hotte and Massif de la Selle.

Calyptranthes sintenisii Kiaersk. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3510.

Eugenia christii Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 4017, Skean 1266. Endemic to Massif de la Hotte.

Eugenia foetida Pers. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1303.

Eugenia formonica Urb. & Ekm. Shrub to tree; moist pine forest/cloud forest (common), 1620-2200 m; Morne Formon. Judd 3817, Skean 1478, 1674. Endemic to Massif de la Hotte (Morne Formon).

Eugenia glabrata (Sw.) DC. Shrub; moist forest on limestone (occasional/common), 950-1050 m; Bois Formon. Judd 3451, 3452, 3454, Skean 1274, 1301, 1657.

Eugenia sp., possibly E. tiburona Urb. & Ekm. Shrub; moist forest on limestone (rare), ca. 950 m; Bois Formon. Skean 1658. Endemic to Massif de la Hotte.

Gomidesia lindeniana Berg. Shrub to small tree; moist pine forest/cloud forest (occasional), 1530-1570 m; southern slopes of Morne Formon, M. Cavalier. Skean 1526.

Myrcia tiburoniana Urb. & Ekm. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1307. Endemic to Massif de la Hotte.

Psidium guajava L. Shrub to small tree; moist forest on limestone, disturbed areas (common), 900-1000 m; Bois Formon. Skean 1314, 1559. Introduced.

Syzygium jambos (L.) Alston. Tree; moist forest on limestone, disturbed areas (common), 950-1050 m; Bois Formon. Judd 4015. Introduced.

Superorder Corniflorae

Order Cornales

Family Vitaceae (1/2)

Cissus dissecta Urb. & Ekm. Vine; moist pine forest (occasional), 1650-1770 m; southern slopes of Morne Formon. Judd 3668.

Cissus verticillata (L.) Nicols. & Jarvis. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3950.

Family Garryaceae (1/1)

Garrya fadyenii Hook. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (common/abundant), 1000-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Frans 1, Judd 3495, 3637, 3820, 3859, Skean 1436.

Family Araliaceae (including Apiaceae) (4/6)

Centella asiatica (L.) Urb. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), ca. 1000 m; Bois Formon. Not collected.

Dendropanax arboreus (L.) Decne & Planch. Tree; moist forest on limestone, cloud forest (very common), 930-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3453, 3829, 3991, Skean 1232.

Dendropanax selleanus (Urb. & Ekm.) A. C. Smith. Tree; cloud forest (occasional), 1500-1600 m; southern slopes of Morne Formon. Judd 3807. Endemic to Massif de la Hotte and Massif de la Selle.

Didymopanax tremulum Krug & Urb. Tree; moist forest on limestone (occasional), moist pine forest/cloud forest (very common/conspicuous), 1000-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3768, Skean 1427. Endemic to Hispaniola.

Hydrocotyle hirsuta Sw. Terrestrial herb; moist forest on limestone, disturbed areas (occasional), 930-1050 m; Bois Formon. Judd 3954a.

Hydrocotyle pusilla A. Rich. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1450-1850 m; Morne Formon, Ravine du Sud. Judd 3744b, Skean 1374.

Order Dipsacales

Family Valerianaceae (1/1)

Valeriana scandens Leofl. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Skean 1166.

Superorder Gentianiflorae

Family Oleaceae (1/1)

Haenianthus oblongatus Urb. Tree; moist pine forest/cloud forest (occasional/common), 1600-1800 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3753a. Endemic to Massif de la Hotte (higher elevations).

Order Gentianales

Family Rubiaceae (12/19)

Chione venosa (Sw.) Urb. Tree; moist forest on limestone (common), 1200-1250 m; Bois Formon, hills south of Morne Formon. Judd 3974. Det. T. Zanoni.

Exostema cf. picardae Urb. Shrub; moist forest on limestone (occasional), ca. 1000 m; Bois Formon. Skean 1139. Endemic to Massif de la Hotte and Massif de la Selle.

Guettarda ovalifolia Urb. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3539, Skean 1227, 1291.

- Hamelia patens Jacq. Shrub; moist forest on limestone, open disturbed areas (occasional), 950-1050 m; Bois Formon. Judd 4013.
- Hamelia ventricosa Sw. Tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1226.
- Hillia parasitica Jacq. Scrambling epiphytic shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3457, Skean 1146.
- Palicourea alpina (Sw.) DC. Shrub; moist forest on limestone (occasional), moist pine forest/cloud forest (very common), 950-2100 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3513, 3731, 3850, 4039, Skean 1330, 1461.
- Peratanthe ekmanii Urb. Terrestrial herb; moist pine forest/cloud forest (occasional/common), 1450-1900 m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3739, Skean 1373. Endemic to Massif de la Hotte (higher elevations).
- Psychotria alpestris Urb. & Ekm. Shrub to small tree; moist pine forest/cloud forest (occasional/common), 1900-2300 m; Morne Formon, Pic Macaya. Judd 3853, 4084, Skean 1395, 1443. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).
- Psychotria berteroana DC. Shrub; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3992, Skean 1148, 1203.
- Psychotria guadalupensis (DC.) Howard. Epiphytic shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3437, Skean 1238.
- Psychotria liogieri Steyermark. Shrub; moist pine forest/cloud forest (common), 1500-2300 m; Morne Formon, Pic Macaya. Judd 3726, Skean 1532. Endemic to Hispaniola.
- Psychotria pubescens Sw. Shrub; moist forest on limestone (very common), 950-1050 m; Bois Formon. Judd 3439, 4010, Skean 1134, 1648.
- Psychotria uliginosa Sw. Subshrub; moist pine forest/cloud forest (common), 1600-1660 m; southern slopes of Morne Formon. Judd 3810.
- Relbunium hypocarpium (L.) Hemsl. Terrestrial herb; moist pine forest/cloud forest (occasional), 2000-2340 m; Morne Formon, Pic Macaya. Judd 4157.
- Rondeletia formonia Urb. & Ekm. Tree; moist pine forest/cloud forest (common), 1900-2200 m; Morne Formon, Pic Macaya. Judd 4066, 4138, Skean 1437, 1440. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).
- Spermacoce assurgens Ruiz & Pav. Terrestrial herb; moist forest on limestone, disturbed clearings (common), 950-1050 m; Bois Formon. Judd 4023, Skean 1158. Often treated as Borreria laevis.
- Stevensia hotteana Urb. & Ekm. Tree; moist pine forest/cloud forest (occasional), 1530-1650 m; southern slopes of Morne Formon, M. Cavalier. Judd 3653. Endemic to Massif de la Hotte. Det. T. Zanoni.

- Sterile Rubiaceae.** Tree; moist forest on limestone (common), 1200-1250 m; Bois Formon. Judd 3965.
- Family Apocynaceae (including Asclepiadaceae) (5/5)**
- Asclepias nivea L. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3788, Skean 1151.
- Asketanthera picardae (Urb.) Woodson. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1195. Endemic to Massif de la Hotte.
- Cynanchum leptocladum (Decne.) Jiménez. Vine; moist pine forest (occasional), 1430-1675 m; southern slopes of Morne Formon. Skean 1511.
- Forsteronia corymbosa (Jacq.) G. F. W. Mey. Vine; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1300, 1579.
- Rauwolfia nitida Jacq. Small tree; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1568.
- Order Bignoniales**
- Family Bignoniaceae (1/2)**
- Tabebuia conferta Urb. Tree; moist forest on limestone (occasional), 950-1250 m (to 1400 m, Ekman field notes); Bois Formon. Judd 3491. Endemic to Massif de la Hotte.
- Tabebuia berteri (DC.) Britt. Tree; moist forest on limestone, moist pine forest/cloud forest (occasional/common), 1000-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Franz 5, Judd 3828.
- Family Scrophulariaceae (2/2)**
- Castilleja haitiensis Urb. & Ekm. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (occasional/common), 950-1730 m; Bois Formon, southern slopes of Morne Formon. Judd 3530, 3833, 3935, 3975, Skean 1173. Endemic to Massif de la Hotte.
- Scrophularia minutiflora Pennell. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (occasional), 1800-1900 m; Morne Formon. Judd 3764.
- Family Plantaginaceae (1/1)**
- Plantago major L. Terrestrial herb; moist pine forest, disturbed clearings, fields (common), ca. 1650 m; Morne Formon. Not Collected. Introduced.
- Family Gesneriaceae (4/10)**
- Besleria lutea L. Shrub; moist forest on limestone, moist pine forest/cloud forest (common), 950-1660 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Franz 2, Judd 3514, 4011, Skean 1161, 1646.
- Columnea domingensis Urb. Epiphytic vine; moist forest on limestone, moist pine forest/cloud forest (occasional/common), 950-1650 m; Bois Formon, southern slopes of Morne Formon. Judd 3450, 3479, Skean 1190. (= Trichantha domingensis (Urb.) Wiehler).

Columnea tulae Urb. Terrestrial viny herb; moist forest on limestone (rare), 900-1050 m; Bois Formon. Judd 3942.
Gesneria aspera Urb. & Ekm. Shrub; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3517, Skean 1228. Endemic to Massif de la Hotte and Massif de la Selle?

Gesneria fruticosa (L.) Kuntze. Shrub; moist forest on limestone (occasional), 930-1050 m; Bois Formon. Judd 3944, Skean 1566. Endemic to Hispaniola.

Gesneria reticulata (Griseb.) Urb. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3432.

Gesneria viridiflora (Decaisne) Kuntz. subsp.

acrochordonanthe L. Skog. Shrub; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3475. Endemic to Massif de la Hotte.

Gesneria sp. 2. Tree; moist forest on limestone (rare), 950-1050 m; Bois Formon. Judd 3500.

Rhytidophyllum auriculatum Hook. Shrub; moist pine forest, especially open rocky areas (common), 1000-1780 m; southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3635, Skean 1364.

Rhytidophyllum bicolor Urb. Shrub; moist forest on limestone, pine forest (occasional), 950-1250 m; Bois Formon, Ravine du Sud. Franz 6, Judd 3980, Skean 1169. Endemic to Massif de la Hotte.

Order Lamiales

Family Verbenaceae (4/5)

Citharexylum caudatum L. Tree; moist pine forest/cloud forest (common/occasional), moist forest on limestone (occasional), 1000-1780 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3655, 4031, Skean 1345, 1518, 1663.

Lantana camara L. Shrub; moist forest on limestone, disturbed open areas (common), 900-1250 m; Bois Formon. Judd 3438, Skean 1164.

Lantana trifolia L. Shrub; moist forest on limestone, disturbed open areas (common/occasional), 900-1050 m; Bois Formon. Judd 3954b, Skean 1268.

Stachytarpheta jamaicensis (L.) Vahl. Herb, moist forest on limestone, disturbed open areas (occasional), ca. 900 m; Bois Formon. Not collected.

Verbena urticifolia L. Terrestrial herb; moist forest on limestone, open disturbed areas (very common), 900-1250 m; Bois Formon. Not collected.

Family Lamiaceae or Labiateae (2/5)

Hyptis mutabilis (L. C. Rich.) Briq. Terrestrial herb; moist forest on limestone, open disturbed areas (occasional), ca. 1000 m; Bois Formon. Not collected.

Hyptis schusteri Urb. Shrub; moist pine forest/cloud forest (common/occasional), 1000-2150 m; Ravine du Sud; "The Saddle" connecting Pic Macaya to Pic Formon. Judd 4077, 4106, Skean 1450. Endemic to Massif de la Hotte and Massif de la Selle.

Salvia cf. arborescens Urb. & Ekm. Shrub; moist forest on limestone (uncommon), ca. 1250 m; Bois Formon. Judd 3914. Endemic to Hispaniola.

Salvia sp. nov. A(3). Shrub; moist pine forest, rocky ridges (uncommon), ca. 1900 m; Ravine du Sud, "The Saddle" between Pic Macaya and Pic Formon. Judd 4078, Skean 1431. Endemic to Massif de la Hotte (Ravine du Sud).

Salvia sp. 2. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 3474.

Superorder Solaniflorae

Order Solanales

Family Hydrophyllaceae (1/1)

Wigandia pruritiva Spreng. Shrub; moist pine forest, open rocky areas (uncommon), 1000-1730 m; southern slopes of Morne Formon, Ravine du Sud. Judd 3839, 4108.

Family Boraginaceae (3/3)

Cordia lima (Desv.) R. & Sch. Shrub, often scrambling; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1780 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3651, Skean 1337, 1656.

Cynoglossum amabile Stapf & Drummond. Terrestrial herb; moist forest on limestone, moist pine forest, open disturbed areas (very common), Bois Formon, Morne Formon, M. Cavalier. Judd 3917, Skean 1152.

Tournefortia bicolor Sw. Vine; cloud forest (common), 1550-1660 m; southern slopes of Morne Formon. Judd 3794.

Family Solanaceae (4/13)

Brunfelsia picardae Krug & Urb. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Judd 4022a. Endemic to Haiti. Det. Timothy Plowman.

Cestrum bicolor Urb. Shrub; moist forest on limestone, moist pine forest (very common), 950-1560 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier, Ravine du Sud. Judd 3463, 3915, 3972, 4042, Skean 1170, 1269. Endemic to Massif de la Hotte.

Cestrum coelophlebium O. E. Schulz. Shrub; moist pine forest/cloud forest (common), 1530-2070 m; Morne Formon, M. Cavalier. Judd 3640, 4041. Endemic to Hispaniola.

Cestrum filipes Urb. & Ekm. Shrub; moist pine forest/cloud forest (occasional/common), 1850-2340 m; Morne Formon, Pic Macaya. Judd 3860, 4158, Skean 1442. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).

Cestrum inclusum Urb. Shrub; moist pine forest (common), 1430-1675 m; southern slopes of Morne Formon. Skean 1509. Endemic to Hispaniola.

Cestrum picardae Alain. Shrub; moist forest on limestone (occasional), 950-1250 m; Bois Formon. Judd 3520, 3928, Skean 1174. Endemic to Hispaniola.

Datura suaveolens Humb. & Bonpl. ex Willd. Shrub; moist forest on limestone (uncommon), 950-1050 m; Bois Formon. Skean 1224. Introduced.

Solanum antillarum O. E. Schulz. Shrub; moist forest on limestone, cloud forest (common/occasional), 950-1700 m; Bois Formon, southern slopes of Morne Formon, Ravine du Sud. Judd 3912, Skean 1323, 1655..

Solanum erianthum D. Don. Shrub; moist forest on limestone, often disturbed openings (occasional/common), 900-1050 m; Bois Formon. Skean 1157, 1242.

Solanum formonense O. E. Schulz. Shrub to small tree; moist pine forest/cloud forest, often disturbed openings (occasional/common), 1450-2100 m; Morne Formon, Ravine du Sud. Judd 3863, Skean 1339. Endemic to Massif de la Hotte (Morne Formon).

Solanum hotteanum Urb. & Ekm. Shrub; moist forest on limestone, disturbed openings, moist pine forest/cloud forest (occasional), 950-2200 m; Bois Formon, Morne Formon, Ravine du Sud. Judd 3716. Endemic to Massif de la Hotte.

Solanum torvum Sw. Shrub; moist forest on limestone, disturbed open areas (common), 950-1350 m; Bois Formon. Judd 3916, 3986, Skean 1156.

Solanum nodiflorum Jacq. Terrestrial herb; moist pine forest, disturbed open areas (common), 950-1650 m (possibly to 1000m); Bois Formon, southern slopes of Morne Formon. Judd 3661.

Family Convolvulaceae (1/1)

Dichondra repens J. R. & G. Forst. Terrestrial herb; moist forest on limestone, disturbed open areas (occasional), ca. 1000 m; Bois Formon. Not collected.

Order Campanulales

Family Campanulaceae (2/4)

Lobelia robusta Graham var. robusta. Shrub to small tree; moist forest on limestone, moist pine forest/cloud forest (very common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3618, 3857, Skean 1137. Possibly conspecific with L. assurgens L.

Lobelia rotundifolia Juss. Scrambling shrub; moist pine forest/cloud forest (common), 1450-2340 m; Morne Formon, Ravine du Sud, Pic Macaya. Judd 3763, Skean 1331, 1389.

Lobelia sp. nov. A. Subshrub; moist pine forest, open rocky areas (occasional), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3790. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).

Siphocampylus sonchifolius (Sw.) McVaugh. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3431, Skean 1233. Endemic to Massif de la Hotte and Massif de la Selle.

Superorder Asteriflorae

Order Asterales

Family Asteraceae or Compositae (17/30)

Baccharis myrsinifolia (Lam.) Pers. Shrub; moist pine forest, usually in open and/or rocky areas (common), 1650-2250 m; Morne Formon, Pic Macaya. Judd 3789, 4061, 4130, Skean 1429. Endemic to Hispaniola.

Bidens alba (L.) DC. Terrestrial herb; moist forest on limestone, moist pine forest, open disturbed areas, fields (common), 900-1700 m; Bois Formon, southern slopes of Morne Formon. Skean 1562.

Chaptalia albicans Urb. & Ekm. Terrestrial herb; moist forest on limestone, moist pine forest (occasional), 1250-2130 m; Bois Formon, Morne Formon, Pic Macaya. Judd 3837.

Conyza apurensis HBK. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (common), 1450-1780 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1369.

Conyza canadensis (L.) Cronq. var. pusilla (Nutt.) Cronq. Terrestrial herb; moist forest on limestone, disturbed openings, fields (common), ca. 900-1350 m; Bois Formon, southern slopes of Morne Formon. Not collected.

Eclipta prostrata (L.) L. Terrestrial herb; moist forest on limestone, disturbed open areas, fields (occasional), ca. 1000 m; Bois Formon. Not collected.

Emilia fosbergii Nicolson. Terrestrial herb; moist forest on limestone, disturbed openings, fields (occasional), 950-1250 m; Bois Formon. Judd 4007.

Emilia sonchifolia (L.) DC. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (occasional/common), 1450-1800m; Morne Formon, Ravine du Sud (northern slopes of Morne Formon). Judd 3724, Skean 1370.

Erigeron domingensis Urb. Terrestrial herb; moist pine forest/cloud forest, disturbed openings (common), 1650-2150m; Morne Formon, Pic Macaya. Judd 3743, Skean 1445. Endemic to Hispaniola.

Eupatorium flavidulum Urb. & Ekm. Shrub; moist pine forest, especially open rocky areas (very common), (1000-)1550-2150 m; Bois Formon (?), Morne Formon, Pic Macaya. Judd 3838, Skean 1438, 1504?. Endemic to Massif de la Hotte.

Eupatorium microchaetum Urb. & Ekm. Shrub; moist forest on limestone, open areas (common), 950-1050 m; Bois Formon; to 1500 m on southern slopes of Morne Formon, according to Ekman. Skean 1197. Endemic to Massif de la Hotte and Massif de la Selle.

Eupatorium cf. nervosum Sw. Shrub; moist forest on limestone, open areas (common), 950-1050 m; Bois Formon. Skean 1183.

Eupatorium odoratum L. Subshrub; moist pine forest/cloud forest (uncommon), ca. 1800 m; Morne Formon. Judd 3732.

Eupatorium porphyrocladum Urb. & Ekm. Shrub; moist pine forest/cloud forest (common), 1450-2200 m; Morne

- Formon, Ravine du Sud (northern slopes of Morne Formon). Skean 1341, 1368. Endemic to Massif de la Hotte (higher elevations).
- Eupatorium stigmaticum Urb. & Ekm. Shrub; moist forest on limestone, disturbed openings (very common), 950-1050 m; Bois Formon. Judd 4018. Endemic to Hispaniola.
- Eupatorium urbanii Ekm. Shrub; moist pine forest, especially open areas (occasional), 1500-2150 m; Morne Formon, Pic Macaya. Skean 1451. Endemic to Massif de la Hotte.
- Gnaphalium domingense Lam. Terrestrial herb; moist pine forest, disturbed openings (occasional), 1650-2000 m; Morne Formon. Judd 3771.
- Gnaphalium purpureum L. Terrestrial herb; moist pine forest, disturbed openings (common), 1800-1860 m; Morne Formon. Skean 1535.
- Lantanopsis hispidula C. Wright. Shrub; moist pine forest (uncommon), 1430-1675 m; Morne Formon. Skean 1510. Det. T. Zanoni.
- Mikania cyanosma Urb. & Ekm. Vine; moist pine forest (occasional), 2150-2340 m; Pic Macaya; Ekman collected on Morne Formon. Skean 1393. Endemic to Massif de la Hotte (Morne Formon, Pic Macaya).
- Mikania dissecta Urb. & Ekm. Vine; moist pine forest (common), 1750-1800 m; Morne Formon, probably also Pic Macaya. Judd 3730. Endemic to Massif de la Hotte (higher elevations).
- Narvalina domingensis Cass. Shrub; moist pine forest, rocky areas (uncommon), ca. 1900 m; south slope of Pic Macaya. Skean 1441. Endemic to Hispaniola.
- Neurolaena lobata (L.) Cass. Subshrub/herb; moist forest on limestone (uncommon), ca. 975 m; Bois Formon. Skean 1135.
- Pluchea symphytifolia (Mill.) Gillis. Shrub; moist pine forest, especially disturbed openings (occasional), 1520-1880 m; southern slopes of Morne Formon. Judd 3631, Skean 1529.
- Senecio hotteanus Urb. & Ekm. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 900-1660 m; Bois Formon, southern slopes of Morne Formon. Judd 3809, 3966, Skean 1319. Endemic to Massif de la Hotte.
- Senecio stenodon Urb. Shrub; moist forest on limestone, moist pine forest/cloud forest, especially in disturbed open areas (very common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Pic Macaya. Judd 3486, 4068, 4116, Skean 1281, 1531. Plants with leaves densely pubescent abaxially to essentially glabrous; described by Urban as var. stenodon and var. deglabratus, respectively, but intergrading and probably not separable. Endemic to Massif de la Hotte.
- Senecio trineurus Griseb. Vine; moist forest on limestone (occasional), 950-2340 m; Bois Formon, Pic Macaya, probably also Morne Formon. Skean 1180, 1329?.

Vernonia buxifolia (Cass.) Less. Shrub; moist pine forest (occasional), 1450-1800 m; Morne Formon, Ravine du Sud (northern slopes of M. Formon). Judd 3761, Skean 1378. Endemic to Hispaniola.

Vernonia saepium Ekm. Shrub; moist forest on limestone, moist pine forest/cloud forest, disturbed openings (abundant/common), 900-1800 m; Bois Formon, Morne Formon, M. Cavalier. Judd 3729, Skean 1136, 1165, 1244, 1650. Endemic to Massif de la Hotte.

Youngia japonica (L.) DC. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed openings (common), 950-1675 m; Bois Formon, southern slopes of Morne Formon. Skean 1516. Introduced.

Superorder Liliiflorae

Order Liliales

Family Amaryllidaceae (1/1)

Hippeastrum puniceum (Lam.) Kuntze. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), ca. 900 m; Bois Formon. Judd 5059. Introduced. Det. Alan Meerow.

Family Hypoxidaceae (1/1)

Hypoxis cf. wrightii (Bak.) Brackett. Terrestrial herb; moist forest on limestone, disturbed openings (occasional), ca. 950 m; Bois Formon. Not collected.

Family Agavaceae (1/2)

Agave antillarum Desc. Succulent herb; moist pine forest, open rocky areas (occasional), 1650-2200 m; Morne Formon, Pic Macaya. Judd 3840, 4135. Endemic to Hispaniola.

Agave sisalana Perrine. Succulent herb; moist forest on limestone, open disturbed areas, fence rows (common), 1000-1250 m; Bois Formon. Judd 3968, Skean 1496. Introduced.

Family Alstroemeriaceae (1/1)

Bomarea edulis (Tuss.) Herb. Vine; cloud forest (common), 1500-1530 m; Ravine du Sud. Skean 1354.

Family Smilacaceae (1/1)

Smilax havanensis Jacq. Vine; moist forest on limestone, moist pine forest/cloud forest (occasional), 950-1770 m; Bois Formon, southern slopes of Morne Formon. Judd 3658, 3808, Skean 1138.

Family Dioscoreaceae (1/1)

Rajania ovata Sw. Vine; moist forest on limestone, moist pine forest/cloud forest (common), 950-1650 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Skean 1147, 1240.

Family Orchidaceae

[Family treatment by D. Dod; he reports 133 species in 42 genera for this family; 98 species are endemic to Hispaniola, and of these 38 are endemic to the Massif de la Hotte.]

Superorder Ariflorae

Order Arales

Family Araceae (2/2)

Philodendron consanguineum Schott. Vine; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3955, Skean 1168.

Anthurium scandens (Aubl.) Engl. Vine; moist forest on limestone (common), 950-1200 m; Bois Formon. Judd 3538, 3941.

Superorder Areciflorae

Order Arecales

Family Arecaceae or Palmae (2/2)

Coccothrinax cf. montana Burret. Tree; moist forest on limestone, cloud forest (uncommon), 1000-1560 m; Bois Formon, Morne Cavalier, Ravine du Sud. Judd 4045, Skean 1295. Endemic to Hispaniola.

Prestoea montana (R. Grah.) Nichols. Tree; moist forest on limestone, moist pine forest/cloud forest (occasional), 975-1675 m; Bois Formon, southern slopes of Morne Formon. Skean 1159, 1506, 1560. (=Euterpe globosa Gaertn.)

Superorder Commeliniflorae

Order Bromeliales

Family Bromeliaceae (5/12)

Catopsis floribunda (Brongn.) Smith. Epiphytic herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1172. Det. T. Zanoni.

Catopsis nitida (Hook.) Griseb. Epiphytic herb; moist forest on limestone (occasional), ca. 1050 m; Bois Formon. Judd 3496.

Guzmania ekmanii (Harms) Harms. Epiphytic herb (or on rocks); moist forest on limestone (occasional), 950-1050 m; Bois Formon. Judd 3502, Skean 1265. Endemic to Hispaniola. Det. T. Zanoni (#3052).

Guzmania lingulata (L.) Mez. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3484.

Pitcairnia elizabethae L. B. Smith. Terrestrial herb; moist forest on limestone, pine forest, open rocky areas (occasional), 975-1000 m; Bois Formon, Ravine du Sud. Judd 4107, Skean 1552. Endemic to Massif de la Hotte and Massif de la Selle.

Tillandsia caribaea L. B. Smith. Epiphytic herb; moist pine forest/cloud forest (common), 1650-2100 m; Morne Formon. Judd 3884.

Tillandsia fasciculata Sw. var. laxispica Mez. Epiphytic herb; moist forest on limestone (very common), 900-1250 m; Bois Formon. Judd 3492, 3508, Skean 1309.

Tillandsia fendleri Griseb. Epiphytic herb; moist forest on limestone, moist pine forest, often disturbed openings (common), 1200-1550 m; Bois Formon, southern slopes of Morne Formon, M. Cavalier. Judd 3671, 3978.

Tillandsia hotteana Urb. Epiphytic herb; cloud forest (common), 1450-1800 m; Ravine du Sud (northern slopes of Morne Formon). Skean 1343. Endemic to Massif de la Hotte and Massif de la Selle.

Tillandsia jenmanii Baker. Epiphytic herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3488.

Vriesea macrostachya (Bello) Mez. Epiphytic herb (or on rocks); moist forest on limestone (occasional), 950-1000 m; Bois Formon. Judd 3489, Skean 1149.

Vriesea sintenisii (Bak.) L. B. Smith & Pitt. Epiphytic herb; moist forest on limestone (occasional), moist pine forest/cloud forest (abundant), 975-2340 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3773, 3895, Skean 1160, 1179, 1342.

Order Commeliniales

Family Cyperaceae (3/3)

Eleocharis flaccida (Rchb.) Urb. Terrestrial herb; moist ground near spring (uncommon), ca. 1400 m; southern slopes of Morne Formon. Skean 1548.

Rhynchospora elongata Boeck. var. ekmanii (Urb.) Kukenthal. Terrestrial herb; moist pine forest/cloud forest (occasional), 1530-2200 m; Morne Formon, M. Cavalier. Judd 3864. Endemic to Hispaniola.

Uncinia hamata (Sw.) Urb. Terrestrial herb; moist pine forest/cloud forest (common), 1800-2100 m; Morne Formon. Judd 3733, Skean 1539.

Family Poaceae or Gramineae (13/15) [collections identified by Dr. David W. Hall, except where otherwise indicated]

Andropogon bicornis L. Terrestrial herb; moist forest on limestone, open disturbed areas, old fields (occasional/very common), 1000-1400 m; Bois Formon, southern slopes of Morne Formon. Judd 3990, Skean 1551.

Andropogon glomeratus (Walt.) BSP. var. pumilus Vasey. Terrestrial herb; moist pine forest, especially disturbed, open and/or rocky areas (occasional/common), 1530-1770 m; southern slopes of Morne Formon, M. Cavalier. Judd 3664, 3836.

Andropogon leucostachyus HBK. Terrestrial herb; moist forest on limestone, disturbed open areas, old fields (occasional), 950-1050 m; Bois Formon. Skean 1572.

Arthrostylidium haitiense (Pilger) Hitchc. & Chase. Climbing bamboo; moist pine forest/cloud forest (abundant), 1450-2300 m; Morne Formon, M. Cavalier, Ravine du Sud, Pic Macaya. Judd 3893, Skean 1468, 1669. Endemic to Hispaniola.

Bambusa vulgaris Schrad. ex J. C. Wendl. Bamboo; moist forest on limestone, disturbed open areas (occasional), 900-1050 m; Bois Formon. Skean 1550. Introduced.

Chusquea abietifolia Griseb. Climbing bamboo; moist pine forest/cloud forest (occasional), 1900-2000 m; "The Saddle" between Pic Macaya and Pic Formon. Judd 4079, Skean 1469.

- Ichnanthus pallens (Sw.) Munro. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3448.
- Isachne rigidifolia (Poir.) Urb. Terrestrial herb; moist pine forest/cloud forest, especially open areas (abundant), 1650-2340 m; Morne Formon, Pic Macaya. Judd 3625, 3765, Skean 1430. Det. W. S. Judd.
- Lasiacis divaricata (L.) Hitchc. Terrestrial herb; moist forest on limestone, pine forest, open disturbed areas (common), 950-1100 m; Bois Formon, Ravine du Sud. Judd 4012.
- Panicum glutinosum Sw. Terrestrial herb; moist pine forest, disturbed open areas (occasional), 1650-1800 m; Morne Formon. Judd 3736.
- Paspalum fimbriatum HBK. Terrestrial herb; moist forest on limestone, disturbed open areas (occasional), 950-1050 m; Bois Formon. Judd 4020.
- Poa annua L. Terrestrial herb; moist pine forest, disturbed open areas, along trails (common), 1600-1850 m; Morne Formon. Judd 3740. Introduced.
- Setaria corrugata (Ell.) Schult. Terrestrial herb; moist forest on limestone, moist pine forest, disturbed open areas (common), 950-1050 m; Bois Formon, Ravine du Sud. Judd 4113, Skean 1497.
- Sporobolus indicus (L.) R. Br. Terrestrial herb; moist forest on limestone, disturbed open areas, old fields (common), 900-1350 m; Bois Formon. Not collected. Det. W. S. Judd.
- Zeugites haitiensis (Pilger) Urb. Terrestrial herb; moist pine forest/cloud forest (occasional), 1800-2100 m; Morne Formon. Judd 3728. Endemic to Hispaniola.
- Order Zingiberales
- Family Heliconiaceae (1/1)
- Heliconia bihai L. Terrestrial herb; moist forest on limestone (common), 950-1050 m; Bois Formon. Judd 3487, Skean 1167.
- Family Zingiberaceae (3/4)
- Alpinia zerumbet (Pers.) B. L. Burtt & R. M. Smith. Terrestrial herb; moist forest on limestone (occasional), 950-1050 m; Bois Formon. Skean 1267. Introduced.
- Hedychium coronarium Koenig. Terrestrial herb; moist forest on limestone (occasional), ca. 1000 m; Bois Formon. Skean 1664. Introduced.
- Renealmia densiflora Urb. Terrestrial herb; moist forest on limestone (occasional/common), 950-1250 m; Bois Formon. Judd 3970, Skean 1132. Endemic to Massif de la Hotte.
- Renealmia jamaicensis (Gaertn.) Horaninow var. puberula (Gagnepain) Maas. Terrestrial herb; moist forest on limestone, moist pine forest/cloud forest (common), 950-2200 m; Bois Formon, Morne Formon, M. Cavalier, Ravine du Sud. Judd 3506, 3712, 3964, Skean 1467.
- Family Cannaceae (1/2)

Canna indica L. Terrestrial herb; moist forest on limestone (occasional), 950-1400 m; Bois Formon, southern slopes of Morne Formon. Skean 1279, 1549. Introduced.

Canna jaegeriana Urb. Terrestrial herb; moist pine forest/cloud forest (occasional), 1530-1560 m; Morne Cavalier. Judd 4046. Introduced.

Unidentified Specimens

Judd 3465

Judd 3515

Vascular plants collected in Morne La Visite National Park,
and adjacent areas, Massif de la Selle, Haiti.

Division Tracheophyta [collections identified by W. S.
Judd, unless otherwise indicated]

Class Lycopsida

Order Lycopodiales

Family Lycopodiaceae (1/4)

Lycopodium clavatum L. Terrestrial herb; moist pine forest,
ravine slope (occasional), ca. 1800 m; Riviere Blanche.
Judd 4285.

Lycopodium complanatum L. Terrestrial herb; moist pine
forest (occasional), ca. 1800 m; "The Depression".
Judd 4494.

Lycopodium reflexum Lam. Terrestrial herb; cloud forest,
moist pine forest (occasional), 2100-2250 m; north
facing slope of Morne la Visite. Judd 4514.

Lycopodium taxifolium Sw. Epiphytic herb; cloud forest
(rare), 1650-2200 m; Riviere Blanche, near Belle
Fontaine. Judd 4422.

Order Selaginellales (1/1)

Family Selaginellaceae

Selaginella leonardii Schmidt. Terrestrial herb; moist pine
forest/cloud forest, rocky cliffs (common), 1700-1800
m; Riviere Blanche. Judd 4266, 4466, 4467. Endemic to
Hispaniola.

Class Filicopsida

Order Ophioglossales (1/1)

Family Ophioglossaceae

Botrychium virginianum (L.) Sw. Terrestrial herb; moist
pine forest (uncommon), ca. 1800 m; "The Depression".
Judd 4483, 4885.

Order Polypodiales

Family Gleicheniaceae (1/1)

Gleichenia bifida (Willd.) Spreng. Scrambling herb; cloud
forest, disturbed open areas (locally common), ca. 1800
m; Morne d'Enfer. Judd 4708.

Family Hymenophyllaceae (1/2)

Hymenophyllum fucoides Sw. Epiphytic herb; cloud forest
(occasional), ca. 2210 m; between Pic Cabaio and Belle
Fontaine/Roche Cabrit. Judd 4849.

Hymenophyllum microcarpum Desv. Epiphytic herb; cloud
forest, ravine slope (common), 1650-1700 m; Riviere
Blanche. Judd 4423.

Family Lophosoriaceae (1/1)

Lophosoria quadripinnata (Gmel.) C. Chr. Terrestrial herb;
moist pine forest, cloud forest (common), 1750-2250 m;
nearly throughout. Judd 4344.

Family Cyatheaceae (1/2)

Alsophila minor (D.C. Eaton) Tryon. Tree fern; cloud forest (occasional), 1650-1700 m; Riviere Blanche. Judd 4419.

Cyathea harrisii Baker. Tree fern; cloud forest, moist pine forest (occasional/common), 1650-2000 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Riviere Blanche. Judd 4252, 4458, 4718.

Cyathea harrisii Baker X Alsophila minor (D.C. Eaton) Tryon. Tree fern; cloud forest (rare), ca. 1650 m; Riviere Blanche; growing with its presumed parents. Judd 4457. Det. suggested by Rolla Tryon.

Family Pteridaceae (4/4) (The following fern families are sometimes treated as members of one large polymorphic family, the Polypodiaceae sensu lato; pteridologists differ as to how this assemblage should be divided, and the classification of R. M. & A. F. Tryon (1982) is followed here.)

Adiantum fragile Sw. Terrestrial herb; moist pine forest, rocky cliffs (uncommon), ca. 1835 m; ravine east of "Park Center". Judd 4833.

Anopteris hexagonia (L.) C. Chr. Terrestrial herb; moist pine forest, cloud forest, on rocks (occasional), 1620-1900 m; Riviere Blanche, Gros Basin in ravine east of Berac area; Ekman collected species on Morne Cabaio. Judd 4318, 4810, 4812. Det. Rolla Tryon.

Cheilanthes notholaenoides (Desv.) Maxon. Terrestrial herb; open pine forest, thin soil over limestone (very common), 2050-2100 m; Galette Seche. Judd 4862.

Pteris hispaniolica Maxon. Terrestrial herb; moist pine forest, on rocks in sinkhole (rare), ca. 2150 m (to ca. 1900 m, Ekman field notes); east of Pic Cabaio. Judd 4845. Endemic to Hispaniola.

Family Vittariaceae (2/3)

Antrophyum feei Schaffner ex Fée. Epiphytic herb; cloud forest (occasional), ca. 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4850.

Vittaria graminifolia Kaulf. Epiphytic herb; cloud forest (uncommon), ca. 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4848.

Vittaria moritziana Mett. Terrestrial or epiphytic herb; cloud forest (rare), ca. 1650 m; Riviere Blanche. Judd 4450.

Family Dennstaedtiaceae (3/4)

Dennstaedtia globulifera (Poir.) Hieron. Terrestrial fern; sinkhole in pine forest (uncommon), ca. 1800 m; Truing Marassa. Judd 4507.

Dennstaedtia sp. 2. Terrestrial herb; moist pine forest, cloud forest (uncommon), 1650-1800 m; Riviere Blanche. Judd 4258, 4435.

Odontosoria aculeata (L.) J. Smith. Vine; cloud forest (occasional), 1800-1880 m; Morne d'Enfer. Judd 4656.

Pteridium aquilinum (L.) Kuhn. Terrestrial herb; pine forest (abundant), 1750-2250 m; ± throughout. Judd 4372.

Family Thelypteridaceae (1/4)

- Thelypteris asplenoides* (Sw.) Proctor. Terrestrial herb; moist pine forest, rocky slopes (rare), 1700-1800 m; Riviere Blanche. Judd 4472. Det. Rolla Tryon.
- Thelypteris decussata* (L.) Proctor. Terrestrial herb; cloud forest (common), 1650-1800 m; Riviere Blanche. Judd 4443. Det. Rolla Tryon.
- Thelypteris rufa* (Kunze) Proctor. Terrestrial herb; cloud forest, moist sinkhole vegetation (common), 1700-1800 m; Riviere Blanche, pinelands near Park Center. Judd 4314, 4464. Det. Rolla Tryon.
- Thelypteris sagittata* (Sw.) Proctor. Terrestrial herb; cloud forest (occasional), ca. 1650 m; Riviere Blanche. Judd 4434. Det. Rolla Tryon.
- Family Dryopteridaceae (5/10)
- Ctenitis subincisa* (Willd.) Ching. Terrestrial herb; cloud forest, moist sinkhole vegetation (uncommon), ca. 2150 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4842. Det. Rolla Tryon.
- Diplazium fuertesii* Brause. Terrestrial herb; moist pine forest/cloud forest, moist sinkhole vegetation (occasional), ca. 1800 m; Riviere Blanche, Truing Marassa. Judd 4303, 4508. Endemic to Hispaniola.
- Diplazium hastile* (Christ) C. Chr. cloud forest (uncommon), 1620-1640 m; Gros Basin in ravine east of Berac area. Judd 4811.
- Diplazium unilobum* (Poir.) Hieron. Terrestrial herb; moist pine forest/cloud forest, moist sinkhole vegetation (common), ca. 1800 m; Riviere Blanche, Truing Marassa. Judd 4254, 4316, 4505. (=? *D. semihastatum* (Kunze) C. Chr.)
- Elaphoglossum* cf. *glabellum* J. Smith. Terrestrial herb; moist pine forest/cloud forest (very common), 2100-2250 m; northern slope of Morne la Visite. Judd 4517.
- Elaphoglossum* cf. *pallidum* (Baker) C. Chr. Epiphytic herb; cloud forest (common), 1850-1950 m; Morne d'Enfer. Judd 4720.
- Elaphoglossum* cf. *sellowianum* (Presl) Moore. Terrestrial or epiphytic herb; cloud forest (common), 1650-1950 m; Morne d'Enfer, Riviere Blanche, ravine east of Park Center. Judd 4425, 4719.
- Polystichum triangularum* (L.) Fée. Terrestrial herb; cloud forest, moist pine forest, rocky slopes (occasional), 1800-2100 m; Roche Plate, Riviere Blanche. Judd 4319, 4334, Thompson 3753-1. (= *P. echinatum* (Gmel.) Christ)
- Polystichum rhizophyllum* (Sw.) Presl. Terrestrial herb; cloud forest (occasional), 1650-1800 m; Riviere Blanche. Judd 4439.
- Woodsia montevidensis* (Spreng.) Hieron. Terrestrial herb; moist pine forest, rocky slopes (common), 1700-1800 m; Riviere Blanche. Judd 4253, 4332, 4470, 4471.
- Family Aspleniaceae (1/7)
- Asplenium auritum* Sw. Epiphytic herb; cloud forest (occasional), 1660-1735 m; between Morne d'Enfer and M.

Fè Noir; Ekman collected species on Morne la Visite at ca. 1800 m. Judd 4754.

Asplenium clutei Gilbert. Terrestrial herb; moist sinkhole vegetation (uncommon), ca. 2150 m; between Pic Cabaio and "Pic 2208". Judd 4846.

Asplenium monanthes L. Terrestrial herb; moist pine forest, cloud forest, open rocky areas (occasional), 1800-2210 m; between Pic Cabaio and Belle Fontaine/Roche cabrit, Riviere Blanche. Judd 4288, 4843, 4847.

Asplenium praemorsum Sw. Terrestrial or epiphytic herb; cloud forest (occasional), 1850-1950 m; Morne d'Enfer. Judd 4659, 4729.

Asplenium radicans L. Terrestrial herb; cloud forest, moist sinkhole vegetation (occasional), 1650-1800 m; Riviere Blanche, Truing Marassa. Judd 4433, 4506.

Asplenium resilens Kunze. Terrestrial herb, pine forest, rocky areas (uncommon), 1880-2050 m; pinelands south of Park Center. Judd 4358.

Asplenium serra Langsd. & Fisch. Terrestrial herb; cloud forest, moist sinkhole vegetation (common), 1800-1950 m; Morne d'Enfer, Truing Marassa. Judd 4504, 4726.

Family Blechnaceae (1/3)

Blechnum fragile (Liebm.) Morton & Lell. Epiphytic herb; cloud forest (common), 1650-1800 m; Riviere Blanche. Judd 4395.

Blechnum occidentale L. Terrestrial herb; pine forest (occasional), 1800-2120 m; ± scattered throughout. Judd 4352, 4572.

Blechnum tuerckheimii Brause. Terrestrial herb; moist pine forest/cloud forest, especially open steep slopes (common), 2100-2250 m; northern slope of Morne la Visite. Judd 4523. Endemic to Hispaniola.

Family Polypodiaceae (4/9)

Campyloneurum angustifolium Sw. Terrestrial herb; moist vegetation in sinkholes, pine forest, especially rocky areas (common), 1750-2050 m; ± throughout pinelands. Judd 4347, 4359, 4489.

Campyloneurum vexatum Eaton. Terrestrial herb; moist pine forest, rocky ledges (occasional), 1900-1935 m; ravine east of Park Center. Judd 4835.

Microgramma piloselloides (L.) Copel. Epiphytic herb; cloud forest (occasional), ca. 1705 m; between Morne d'Enfer and M. Fè Noir. Judd 4785.

Pleopeltis macrocarpa (Cav.) Maxon. Epiphytic or terrestrial herb; moist pine forest, cloud forest (common), 1650-2050 m; Riviere Blanche, ravine east of Park Center, scattered in pinelands. Judd 4356, 4440, 4497.

Polypodium antillense Maxon. Terrestrial herb; moist sinkhole vegetation (rare), ca. 1800 m; Truing Marassa. Judd 4317.

Polypodium lasiopus Klotzsch. Epiphytic herb; cloud forest (occasional), 1650-1800 m; Riviere Blanche. Judd 4438.

- Polypodium loriceum L. Epiphytic herb; cloud forest (occasional), 1650-1800 m; Riviere Blanche. Judd 4418.
- Polypodium pectinatum L. Epiphytic or terrestrial herb; moist pine forest, cloud forest (occasional), 1700-1800 m; between Morne d'Enfer and M. Fè Noir, "The Depression". Judd 4492, 4787.
- Polypodium thysanolepis A. Br. Epiphytic herb; moist pine forest (common), 1650-2000 m; Riviere Blanche, Roche Cabril, scattered in pinelands. Judd 4296, 4397, Thompson 3754-2.

Class Coniferopsida

Order Coniferales

Family Pinaceae (1/1)

Pinus occidentalis Sw. Tree; dominant tree forming pinelands (abundant), 1700-2300 m; ± throughout plateau. Judd 4383. Endemic to Hispaniola.

Family Cupressaceae (1/1)

Juniperus ekmanii Florin. Tree; moist pine forest, disturbed cloud forest (rare/nearly extinct), 1750-2210 m; "The Depression" (dead stumps and logs), between Pic Cabaio and Tete Opaque (living plants only seen ca. SSW of Tete Opaque). Baird LV-32, Judd 4853, Woods s.n. 17 Jan. 1985. Endemic to the Massif de la Selle.

Family Podocarpaceae (1/1)

Podocarpus aristulatus Parl. Tree; cloud forest (occasional), 1900-2210 m; between Pic Cabaio and Belle Fontaine/ Roche Cabrit; Ekman reports from Morne la Visite, in field notes. Judd 4852. Endemic to Hispaniola. (= P. buchii Urb.)

Class Angiospermopsida

Superorder Annoniflorae

Order Annonales

Family Lauraceae (2/3)

Ocotea acarina C. K. Allen. Tree; cloud forest (common), 1700-1930 m; Morne d'Enfer to just west of M. la Visite, Riviere Blanche. Judd 4408. Endemic to Massif de la Selle.

Ocotea wrightii (Meissn.) Mez. Tree; cloud forest (occasional/common), 1700-1930 m; Morne d'Enfer to just west of M. la Visite, Riviere Blanche. Judd 4647, 4794.

Persea anomala Britt. & Wils. Tree; cloud forest, moist pine forest (very common), 1650-2200 m; scattered throughout, but especially along ridge from Morne d'Enfer to Tete Opaque, Riviere Blanche, ravine east of Park Center. Baird LV-24, Judd 4301, 4526, 4724.

Family Piperaceae (1/8)

Peperomia acuminata Ruiz & Pav. Terrestrial herb; cloud forest, moist sinkhole vegetation (occasional), 1650-2100 m; Morne d'Enfer, to M. la Visite(?), Riviere Blanche, Truing Marassa. Judd 4431, 4501.

Peperomia galoides HBK. Terrestrial herb; moist pine forest, cloud forest, especially on rocks (occasional), 1750-1920 m; Morne d'Enfer, to M. la Visite (?), "The Depression". Judd 4486, 4690.

Peperomia glabella (Sw.) Dietr. Epiphytic or terrestrial herb; moist pine forest, especially on rocks (occasional), 1800-1860 m; "The Depression". Judd 4502, 4793.

Peperomia hispidula (Sw.) Dietr. Terrestrial herb; moist sinkhole vegetation (uncommon), ca. 1800 m; Truing Marassa. Judd 4500.

Peperomia leonardii Trel. Terrestrial herb; moist sinkhole vegetation (uncommon), ca. 1800 m; Truing Marassa. Judd 4499. Endemic to Hispaniola.

Peperomia quadrifolia (L.) HBK. Terrestrial herb; cloud forest, disturbed opening, on rocks (uncommon), 1850-1920 m; Morne d'Enfer. Judd 4691.

Peperomia tetraphylla (S. Forst.) Hook. & Arn. Epiphytic herb; cloud forest, moist pine forest (occasional), 1740-1800 m; Morne la Visite, Riviere Blanche, ravine east of Park Center. Judd 4260, 4799, Thompson 3748-7.

Peperomia sp. 14. Terrestrial herb; cloud forest (uncommon), 1620-1640 m; Gros Basin in ravine east of Berac area. Judd 4613.

Order Berberidales

Family Ranunculaceae (2/2)

Clematis dioica L. Vine; cloud forest (uncommon), 1740 m; Riviere Blanche. Judd 4804.

Ranunculus recurvatus Poir. var. tropicus (Griseb.) Fawc. & Rendle. Terrestrial herb; cloud forest (occasional), 1650-2100 m; Morne la Visite, Riviere Blanche. Judd 4441.

Family Papaveraceae (1/1)

Bocconia frutescens L. Shrub; moist pine forest, cloud forest, especially disturbed areas (common), 1750-2200 m; ± throughout park and adjacent areas. Baird LV-29, Judd 4350.

Family Fumariaceae (1/1)

Fumaria carpreolata L. Terrestrial herb; moist pine forest, along stream (common), 1800-1900 m; Riviere Blanche. Judd 4298. Introduced.

Superorder Chenopodiiflorae

Order Chenopodiales

Family Phytolaccaceae (1/2)

Phytolacca rivinoides Kunth & Bouché. Terrestrial herb; cloud forest, open disturbed areas (occasional), 1700-1850 m; Morne d'Enfer to M. Fè Noir. Judd 4670.

Phytolacca icosandra L. Terrestrial herb; cloud forest, moist pine forest, especially disturbed areas (occasional), 1800-2220 m; Morne Fè Noir to Belle Fontaine/Roche Cabrit. Judd 4561, 4837.

Family Caryophyllaceae (4/5)

Arenaria lanuginosa (Michx.) Rohrb. Terrestrial herb; pine forest, disturbed open areas (occasional), 1800-1900 m; ± throughout plateau. Judd 4881.

Cerastium glomeratum Thuill. Terrestrial herb; pine forest, disturbed open areas (common), 1750-1900 m; ± throughout plateau. Judd 4485, 4882b.

Silene gallica L. Terrestrial herb; pine forest, disturbed open areas (common), 1750-1900 m; ± throughout plateau. Judd 4493. Introduced.

Stellaria antillana Urb. Terrestrial herb; cloud forest, disturbed open areas (locally common), 1600-1650 m; ravine east of Berac area. Judd 4944.

Stellaria media (L.) Vill. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1700-1900 m; ± throughout plateau. Judd 4463, 4882a. Introduced.

Family Amaranthaceae (1/1)

Iresine herbstii Hook. Terrestrial herb; cloud forest, disturbed open areas (rare), 1700-1800 m; Morne Fé Noir. Judd 4780. Introduced.

Superorder Theiflorae

Order Theales

Family Theaceae (1/1)

Laplacea alpestris (Krug & Urb.) Dyer. Tree; cloud forest (uncommon), 1660-2160 m; between Morne d'Enfer and M. Fé Noir, Tete Opaque; Ekman also collected species at ca. 2200 m on Morne la Visite and Pic Cabaio. Baird LV-25, Judd 4756. Endemic to Hispaniola.

Family Aquifoliaceae (1/3)

Ilex fuertesiana (Loes.) Loes. Shrub; cloud forest (uncommon), ca. 2150 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit; Ekman also collected species from north slope of Morne la Visite at ca. 1600 m. Judd 4841. Endemic to Hispaniola.

Ilex macfadyenii (Walp.) Rehder. Shrub; pine forest, cloud forest (occasional), 1650-2300 m; nearly throughout. Judd 4351, 4540.

Ilex sp. nov. A. Shrub; cloud forest (uncommon), 1700-1800 m; Riviere Blanche. Judd 4403. Endemic to Massif de la Selle (Riviere Blanche).

Family Clusiaceae or Guttiferae (2/5)

Clusia clusioides (Griseb.) D'Arcy. Shrub; cloud forest (occasional), ca. 1705 m; between Morne d'Enfer and M. Fé Noir. Judd 4784.

Hypericum fuertesii Urb. Terrestrial herb; cloud forest/moist pine forest, steep rocky slopes (common), 2050-2250 m; northern slope of Morne la Visite. Judd 4518. Endemic to Hispaniola.

Hypericum hypericoides (L.) Crantz. Subshrub; pine forest (occasional), 1750-1800 m; "The Depression". Judd 4490.

Hypericum millefolium Urb. & Ekm. Shrub; cloud forest, open areas (rare), ca. 2300 m; Pic Cabaio. Judd 4547.
Endemic to the Massif de la Selle.

Hypericum perforatum L. Terrestrial herb; pine forest, cloud forest, especially disturbed open areas (abundant), 1700-2300 m; nearly throughout, especially pinelands. Judd 4369, 4665. Introduced.

Family Ericaceae (2/5)

Gaultheria domingensis Urb. Shrub; pine forest (uncommon), cloud forest/moist pine forest (common), 1800-2250 m; northern slope of Morne la Visite, pinelands near Riviere Blanche. Judd 4289, 4515.

Lyonia buchii Urb. Shrub to tree; cloud forest/moist pine forest (common), 1500-2250 m; northern slope of Morne la Visite. Judd 4345, 4513. Endemic to Hispaniola.

Lyonia microcarpa Urb. & Ekm. Shrub to tree; pine forest, cloud forest (occasional/common), 1750-2200 m; scattered throughout pinelands, locally dominant in hardwoods between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4461, 4481, 4827, 4854. Endemic to Massif de la Selle.

Lyonia rubiginosa (Pers.) G. Don var. costata (Urb.) Judd. Shrub; pine forest (occasional), ca. 1825 m; pinelands near Park Center. Judd 4807, 4808, 4886. Endemic to Hispaniola.

Lyonia truncata Urb. var. truncata. Shrub to small tree; pine forest (rare), ca. 1800 m; "The Depression". Judd 4460. Endemic to Massif de la Selle.

Order Ebenales

Family Sapotaceae (2/2)

Bumelia subintegra Urb. & Ekm. Shrub; pine forest, cloud forest (occasional), 1700-2160 m; scattered in pinelands, Riviere Blanche, Morne d'Enfer to just west of M. la Visite, Tete Opaque; Ekman collected in vicinity of Morne Cabaio, ca. 2200 m. Baird LV-23, Judd 4381, 4449. Endemic to Massif de la Selle.

Dipholis cubensis (Griseb.) Pierre. Shrub; cloud forest (uncommon), 1850-1950 m; Morne d'Enfer. Judd 4717.

Order Primulales

Family Myrsinaceae (2/4)

Ardisia fuertesii Urb. Shrub to small tree; cloud forest (occasional/common), 1660-2000 m; Morne d'Enfer to M. la Visite, Riviere Blanche. Judd 4411, 4653, 4766. Endemic to Massif de la Selle and Massif de la Hotte.

Ardisia picardae Urb. Shrub to small tree; cloud forest (common), 1650-2050 m; Morne d'Enfer to M. la Visite, Riviere Blanche, ravine east of Park Center. Judd 4442, 4587. Endemic to Massif de la Selle.

Myrsine acrantha Krug & Urb. Shrub; cloud forest (occasional/common), 1850-2300 m; Morne d'Enfer to Tete Opaque, Roche Plate, ravine east of Park Center. Baird LV-31, Judd 4546, 4564, 4646, 4692, Thompson 3753-13.

Myrsine coriacea (Sw.) R. Br. ex Roem. & Schult. Shrub to small tree; cloud forest, moist pine forest (very

common), 1650-2100 m; Morne d'Enfer to M. la Visite, Riviere Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4315, 4426, 4716.

Family Primulaceae (1/1)

Anagallis arvensis L. Terrestrial herb; moist vegetation along stream, open areas (common), ca. 1800 m; Riviere Blanche. Judd 4324. Introduced.

Order Polygonales

Family Polygonaceae (2/2)

Coccoloba picardae Urb. Shrub to small tree; cloud forest (common), 1700-2000 m; Morne d'Enfer to M. la Visite, Riviere Blanche; Ekman collected species near Pic Cabaio. Judd 4642, 4409, 4667, 4668. Endemic to Massif de la Selle.

Rumex obtusifolius L. Terrestrial herb; moist pine forest, disturbed open areas, often along streams (common), 1600-1800 m; Riviere Blanche, ravine east of Berac area, scattered in pinelands. Judd 4468, 4953. Introduced.

Superorder Celastriflorae

Order Celastrales

Family Celastraceae (1/1)

Torralbasia cuneifolia (C. Wr.) Krug. & Urb. Shrub to tree; cloud forest (uncommon), ca. 1750 m; Riviere Blanche. Judd 4800.

Superorder Santaliflorae

Order Santalales

Family Eremolepidaceae (1/1)

Eremolepis wrightii Griseb. Epiphytic and parasitic shrub; cloud forest (rare), 1700-1800 m; Riviere Blanche; Ekman collected species from Pic Cabaio at ca. 2300 m. Judd 4414. Det. Elizabeth A. Kellogg.

Family Loranthaceae (1/3)

Dendropemon bistratus Urb. Epiphytic and parasitic shrub; cloud forest (occasional), 1650-1900 m; Morne la Visite, Riviere Blanche. Judd 4398, 4429, Thompson 3748-6. Endemic to Hispaniola.

Dendropemon parvifolius (Sw.) Steud. Epiphytic and parasitic shrub; cloud forest (uncommon), ca. 2300 m; Pic Cabaio. Judd 4541.

Dendropemon pycnophyllum Krug & Urb. Epiphytic and parasitic shrub (on Pinus); pine forest (common), 1750-2200 m; + throughout pinelands. Baird LV-30, Judd 4378. Endemic to Hispaniola.

Family Viscaceae (1/2)

Dendrophthora cypresoides (Macf.) Eichl. Epiphytic and parasitic shrub; cloud forest (occasional), 1650-2160 m; Morne d'Enfer to M. Nacel, Tete Opaque, Riviere Blanche. Baird LV-34, Judd 4448, 4760.

Dendrophthora serpyllifolia (Griseb.) Krug & Urb. Epiphytic and parasitic shrub; cloud forest (occasional), ca. 1900 m; Morne Nacel. Judd 4649.

Superorder Violiflorae

Order Violales

Family Passifloraceae (1/2)

Passiflora orbiculata Cav. Vine; cloud forest, moist pine forest (uncommon), 1750-1950 m; Morne d'Enfer to M. Fè Noir, "The Depression". Judd 4478, 4721.

Passiflora sexflora Juss. Vine; cloud forest (occasional); 1800-2100 m; Morne d'Enfer, Roche Plate. Judd 4660, Thompson 3753-6.

Family Cucurbitaceae (1/1)

Melothria domingensis Cogn. Vine; cloud forest, disturbed open areas (occasional), 1800-1900 m; Morne d'Enfer. Judd 4669. Endemic to Hispaniola.

Family Begoniaceae (1/2)

Begonia domingensis DC. Terrestrial herb; cloud forest (common), 1650-1800 m; Riviere Blanche. Judd 4446. Endemic to Hispaniola.

Begonia platyptera Urb. Terrestrial herb; cloud forest, moist pine forest (common), 1600-1800 m; Riviere Blanche, ravine east of Berac area. Judd 4300. Endemic to Massif de la Selle.

Order Capparales

Family Brassicaceae or Cruciferae (6/6)

Barbarea verna (Mill.) Aschers. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1750-2000 m; ± throughout pinelands. Judd 4961. Introduced.

Brassica campestris L. Terrestrial herb; pine forest, disturbed open areas, fields (very common), 1750-2000 m; ± throughout pinelands. Judd 4290. Introduced.

Cardamine hirsuta L. Terrestrial herb; cloud forest, open disturbed areas, fields (occasional), ca. 2210 m; between Pic Cabaio and Belle Fontaine/Roche Cabrit. Judd 4856. Introduced.

Lepidium virginicum L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1700-1900 m; ± throughout pinelands. Judd 4638.

Nasturtium officinale R. Br. Terrestrial/aquatic herb; along margins of (or in) streams (common), ca. 1800 m; Riviere Blanche. Judd 4287. Introduced.

Raphanus sativus L. Terrestrial herb; cloud forest/moist pine forest, disturbed open areas, fields (uncommon), ca. 2180 m; between Morne la Visite and Pic Cabaio. Judd 4512. Introduced.

Superorder Malviflorae

Order Malvales

Family Malvaceae (1/1)

Sphaeralcea abutiloides (L.) G. Don. Shrub; pine forest (uncommon), 1800-2050 m; pinelands south of Park Center. Judd 4376.

Family Ulmaceae (1/1)

Trema micrantha (L.) Blume. Tree; cloud forest, moist pine forest (common), 1600-2150 m; Morne d'Enfer to M. la Visite, Roche Plate, Riviere Blanche, ravine east of Berac area. Judd 4404, 4568, Thompson 3748-3, 3753-1.

Family Urticaceae (including Moraceae, Cecropiaceae) (2/13)

Gyrotaenia myriocarpa Griseb. Shrub; moist pine forest, cloud forest (occasional/common), 1660-2250 m; Morne d'Enfer to north slope of M. la Visite. Judd 4522, 4752.

Pilea cellulosa (Spreng.) Urb. Terrestrial herb; cloud forest (occasional), 1600-1650 m; ravine east of Berac area. Judd 4948.

Pilea cephalantha Wedd. Terrestrial herb; cloud forest (common), 1650-1900 m; Riviere Blanche, Morne d'Enfer, to M. Nacel(?). Judd 4390. Endemic to Massif de la Selle.

Pilea domingensis Urb. Terrestrial herb; moist pine forest (common), ca. 1800 m; Riviere Blanche. Judd 4262. Endemic to Hispaniola.

Pilea franguervilleana Wedd. Terrestrial herb; cloud forest, moist pine forest (common), 1800-2220 m; Morne la Visite to Pic Cabaio. Judd 4532, 4562?, 4563. Endemic to Massif de la Selle.

Pilea hepatica Urb. & Ekm. Terrestrial herb; cloud forest (uncommon), 1600-1650 m; ravine east of Berac area. Judd 4947. Endemic to Massif de la Selle and Massif de la Hotte.

Pilea lanceolata (Lam.) Wedd. Terrestrial herb; pine forest, cloud forest (common), 1800-2300 m; Pic Cabaio, scattered in pinelands, Riviere Blanche. Judd 4382. Endemic to Hispaniola.

Pilea cf. lapidincola Urb. & Ekm. Terrestrial herb; cloud forest (common), ca. 1900 m; Morne Nacel. Judd 4706. Endemic to Massif de la Selle.

Pilea microphylla (L.) Liebm. Terrestrial herb; moist pine forest, rocky slopes (common), 1800-2160 m; La Visite to Tete Opaque, Riviere Blanche. Baird LV-26, Judd 4267, 4282.

Pilea parietaria (L.) Blume. Terrestrial herb; cloud forest, open disturbed areas (occasional), 1880-1900 m; Morne d'Enfer. Judd 4680.

Pilea propingua Wedd. Terrestrial herb; moist pine forest, rocky slopes (common), ca. 1800 m; Riviere Blanche. Judd 4325. Endemic to Hispaniola.

Pilea psilogyne Urb. Terrestrial/aquatic herb; on rocks in stream (common), ca. 1800 m; Riviere Blanche; Ekman collected species on Morne Cabaio, ca. 2200 m. Judd 4335. Endemic to Massif de la Selle.

Pilea sp. 20. Terrestrial herb; cloud forest (common), 1850-1950 m; Morne d'Enfer. Judd 4723.

Order Rhamnales

Family Rhamnaceae (1/1)

Rhamnus sphaerosperma Sw. Shrub; pine forest (rare), ca. 1900 m; ridge east of Park Center. Judd 4826.

Order Euphorbiales

Family Euphorbiaceae (5/5)

Ditta sp. nov. Shrub; cloud forest (occasional), ca. 1740 m; Riviere Blanche. Judd 4801. Endemic to Massif de la Selle. Det. T. Zanoni.

Euphorbia peplus L. Terrestrial herb; pine forest, especially disturbed areas (occasional/common), 1800-2050 m; Riviere Blanche, + scattered in pinelands. Judd 4337, 4374. Introduced.

Phyllanthus lindenianus Baill. var. inaequifolius (Webster) Webster. Terrestrial herb; pine forest, especially ravine slopes and disturbed areas (very common), 1800-2000 m; Riviere Blanche, + scattered in pinelands. Judd 4331, 4880. Endemic to Massif de la Selle.

Ricinus communis L. Shrub; pine forest, disturbed open areas (common), ca. 1900 m; near Park Center, + throughout plateau in disturbed localities. Judd 4939. Introduced.

Sapium buchii Urb. Tree; cloud forest (occasional), 1850-2100 m; Morne d'Enfer to west slope of M. la Visite, Roche Plate. Judd 4652, Thompson 3753-8. Endemic to Hispaniola.

Family Thymeliaceae (1/1)

Daphnopsis crassifolia (Poir.) Meissn. Shrub; pine forest, cloud forest (very common), 1700-2300 m; Morne d'Enfer to Tete Opaque, Roche Plate, Riviere Blanche, ravine east of Park Center, other ravines, + throughout pinelands. Judd 4312, 4412, 4465, 4480, Thompson 3753-10. Endemic to Hispaniola.

Superorder Geraniiflorae

Order Geriales

Family Linaceae (1/1)

Linum usitatissimum L. Terrestrial herb; pine forest, especially open disturbed areas (common), 1700-1900 m; + throughout pinelands. Judd 4323. Introduced.

Family Oxalidaceae (1/2)

Oxalis corniculata L. Terrestrial herb; pine forest (occasional), ca. 1800 m; scattered in pinelands. Judd 4415.

Oxalis eggersii Urb. Terrestrial herb; pine forest, rocky areas (occasional), 1750-1800 m; "The Depression". Judd 4498.

Family Geraniaceae (2/3)

Geranium purpureum Vill. Terrestrial herb; pine forest, cleared pasture (occasional), ca. 2050-2250 m; Galette Seche to ridge west of Pic Cabaio. Judd 4859. Introduced.

Geranium rotundifolium L. Terrestrial herb; pine forest, disturbed open areas (very common), 1800-2150 m; Morne la Visite, + throughout pinelands. Judd 4363. Introduced.

Pelargonium graveolens L'Her. ex Ait. Terrestrial herb; moist pine forest (rare), ca. 2120 m; Morne la Visite. Judd 4573. Introduced.

Family Malpighiaceae (2/2)

Bunchosa ekmanii Urb. & Ekm. Shrub; cloud forest (uncommon), 1700-1800 m; Riviere Blanche. Judd 4402. Endemic to Massif de la Selle.

Malpighia macracantha Urb. & Ndz. Shrub; cloud forest (occasional), 1700-1900 m; Morne Nacel, Riviere Blanche; Ekman collected species near Pic Cabaio, ca. 2200-2300 m. Judd 4401. Endemic to Massif de la Selle.

Superorder Rutiflorae

Order Rutales

Family Rutaceae (2/2)

Citrus aurantium L. Tree; cloud forest (occasional), 1850-1920 m; Morne d'Enfer. Judd 4687. Introduced.

Zanthoxylum tetraphyllum (Urb. & Ekm.) Jiménez. Shrub; cloud forest, open rocky area (rare), 2220 m; just west of Pic Cabaio. Judd 4560. Endemic to Massif de la Selle.

Family Simaroubaceae (1/1)

Picrasma selleana Urb. Shrub to small tree; cloud forest (occasional), 1700-1900 m; Morne Nacel, Riviere Blanche. Judd 4400. Endemic to Massif de la Selle.

Family Myricaceae (1/1)

Myrica picardae Krug & Urb. Shrub; pine forest, moist pine forest/cloud forest (very common), 1650-2250 m; Morne la Visite to Belle Fontaine/Roche Cabrit, probably also at Tete Opaque, ± throughout pinelands. Judd 4353, 4520, Thompson 3748-11. Endemic to Hispaniola.

Family Sapindaceae (1/1)

Allophylus crassinervis Radlk. Shrub; cloud forest (occasional), 1660-1740 m; between Morne d'Enfer and M. Fè Noir. Judd 4765.

Family Sabiaceae (1/1)

Meliosma impressa Krug & Urb. Tree; cloud forest, moist pine forest (common), 1600-2150 m; Morne d'Enfer to M. la Visite, Riviere Blanche, ravine east of Berac area, ravine east of Park Center. Judd 4306, 4413, 4531, 4832. Endemic to Hispaniola.

Family Fabaceae (4/5)

Caesalpinia sepiaria Roxb. Scrambling shrub; cloud forest (uncommon), 1900-2100 m; Morne Nacel, western slope of Morne la Visite, Roche Plate. Judd 4707, Thompson 3753-14.

Medicago lupulina L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1800-1950 m; ± throughout pinelands. Judd 4879. Introduced.

Phaseolus lunatus L. Terrestrial herb; cloud forest, disturbed open areas (uncommon), 1650-1700 m; Riviere Blanche. Judd 4445. Introduced.

Trifolium arvense L. Terrestrial herb; pine forest (occasional), ca. 1800 m; pinelands near Riviere Blanche. Judd 4284. Introduced.

Trifolium repens L. Terrestrial herb; pine forest, disturbed open areas, fields (common), 1800-2300 m; Morne la Visite to Pic Cabaio, ± throughout pinelands. Judd 4877. Introduced.

Superorder Rosiflorae

Order Rosales

Family Rosaceae (2/3)

Fragaria vesca L. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1750-2300 m; ± throughout pinelands, southern slope of Morne la Visite to Pic Cabaio. Judd 4349. Introduced.

Rubus argentifrons Bailey. Terrestrial herb; pine forest (abundant), 1750-2200 m; ± throughout pinelands. Judd 4362. Endemic to Hispaniola; the very similar species, R. sellleanus Helwig., is probably also present.

Rubus haitiensis Bailey. Terrestrial herb; pine forest (abundant), 1750-2200 m; ± throughout pinelands. Judd 4473. Endemic to Hispaniola.

Family Cunoniaceae (1/1)

Weinmannia pinnata L. Shrub to tree; cloud forest, moist pine forest (very common), 1750-2250 m; Morne d'Enfer to M. la Visite, Riviere Blanche, ravine east of Park Center. Judd 4292, 4311, 4525.

Family Brunelliaceae (1/1)

Brunellia comocladifolia Humb. & Bonpl. subsp. domingensis Cuatr. Tree; cloud forest, moist pine forest (very common), 1600-2250 m; Morne d'Enfer to Tete Opaque, Riviere Blanche. Judd 4417, 4567.

Family Staphyleaceae (1/1)

Turpinia picardae Urb. Shrub to small tree; cloud forest (occasional/common), 1700-1900 m; Morne d'Enfer to M. Nacel, M. la Visite(?), "The Depression". Judd 4476, 4651, 4681, 4775. Endemic to Massif de la Selle and Massif de la Hotte.

Superorder Myrtiflorae

Order Mytales

Family Lythraceae (1/1)

Cuphea rotundifolia Koehne. Terrestrial herb; cloud forest, disturbed open areas (occasional), 1850-1900 m; Morne d'Enfer. Judd 4666.

Family Melastomataceae (4/11)

Heterotrichum angustifolium DC. Shrub; moist pine forest (occasional), ca. 1500 m; northern slope of Morne la Visite. Not collected; this species was collected by Ekman at ca. 1600 m.

Heterotrichum umbellatum (Mill.) Urb. Shrub to small tree; cloud forest, disturbed openings (common), 1850-1880 m; Morne d'Enfer. Judd 4657.

Mecranium amygdalinum (Desr.) C. Wr. Shrub to small tree; cloud forest (occasional/common), 1700-1880 m; Morne d'Enfer to M. Fè Noir. Judd 4663, 4750, 4753, 4783, Skean 1055, 1056.

Meriania involucrata (Desr.) Naud. Shrub to tree; cloud forest (occasional), 1600-1900 m; Morne d'Enfer to ravine east of Berac area (east of M. Nacel). Judd 4664, 4758, 4779, Skean 1058. Endemic to Hispaniola.

Miconia lanceolata (Desr.) DC. Shrub to tree; cloud forest (uncommon), 1850-2210 m; Morne d'Enfer, Pic Cabaio to Belle Fontaine. Judd 4712, 4851. Endemic to Hispaniola.

Miconia luteola Cogn. Shrub; pine forest, Morne la Visite. Collected by E. Ekman; not re-collected in park, but collected to the east in vicinity of Pic la Selle, Judd 4932. Endemic to Massif de la Selle.

Miconia markgraffii Urb. & Ekm. Shrub; cloud forest (occasional), 1600-1900 m; Morne Fè Noir to ravine east of Berac area, Riviere Blanche. Judd 4454, 4778, 4940. Endemic to Massif de la Selle.

Miconia rigidissima Urb. & Ekm. Shrub; cloud forest, open rocky areas (uncommon), ca. 2300 m; Pic Cabaio; Ekman also collected this species on Morne la Visite. Judd 4538. Endemic to Massif de la Selle.

Miconia sellleana Urb. & Ekm. Shrub to small tree; cloud forest, moist pine forest (occasional), 1900-2250 m; Morne la Visite, Riviere Blanche, ravine east of Park Center. Judd 4519, 4528, 4566. Endemic to Hispaniola; Ekman also collected in Massif de la Hotte.

Miconia subcompressa Urb. & Ekm. Shrub; moist pine forest (rare), ca. 1800 m; Riviere Blanche. Judd 4251. Endemic to Hispaniola.

Miconia tetrastoma Naud. Shrub; cloud forest (occasional), 1660-1880 m; Morne d'Enfer to M. Fè Noir. Judd 4662, 4733.

Miconia xenotricha Urb. & Ekm. Shrub; cloud forest (occasional/very common), 1600-1900 m; Morne d'Enfer to ravine east of Berac area, Riviere Blanche. Judd 4250, 4455, 4658, 4725, 4762. Endemic to Massif de la Selle and Massif de la Hotte.

Family Onagraceae (2/3)

Epilobium coloratum Muhl. ex Willd. Terrestrial herb; along stream (common), ca. 1800 m; Riviere Blanche. Judd 4327. Endemic to Hispaniola.

Fuchsia pringsheimii Urb. Shrub; cloud forest, moist pine forest (common), 1650-2300 m; Morne d'Enfer to Tete Opaque, Riviere Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4313, 4393, 4552, 4672, 4676, 4677, 4731. Endemic to Hispaniola.

Fuchsia triphylla L. Shrub; cloud forest to pine forest (common), 1650-2200 m; Morne d'Enfer to Tete Opaque, Riviere Blanche, ravine east of Park Center, other ravines in pinelands, + scattered throughout pinelands.

Baird LV-28, Judd 4366, 4673, 4732. Endemic to Hispaniola.

Fuchsia pringsheimii Urb. X triphylla L. Shrub; cloud forest (occasional), 1850-1880 m; Morne d'Enfer. Judd 4674, 4675. Hybrids have been reported from several localities in the Massif de la Selle.

Family Myrtaceae (2/5)

Calyptranthes densifolia Urb. & Ekm. Shrub to tree; cloud forest (occasional), 1900-2250 m; Morne Nacel, between Pic Cabaio and Belle Fontaine/Roche Cabrit; Ekman collected species on Morne la Visite and M. Cabaio. Judd 4645. Endemic to the Massif de la Selle.

Calyptranthes nummularia Berg. Shrub; moist pine forest (uncommon), ca. 1860 m; "The Depression". Judd 4791. Endemic to Massif de la Selle and Massif de la Hotte.

Calyptranthes cf. pallens (Poir.) Griseb. Small tree; cloud forest (common), 1700-2100 m; Morne Nacel, Roche Plate, Riviere Blanche. Judd 4399, 4654, Thompson 3753-4.

Eugenia lineata (Sw.) DC. Small tree; cloud forest (occasional), 1850-1880 m; Morne d'Enfer. Judd 4682. Endemic to Hispaniola.

Eugenia picardae Krug & Urb. Shrub; cloud forest (occasional), 1875-1930 m; Morne Nacel to M. la Visite. Judd 4650, 4820. Endemic to Massif de la Selle.

Superorder Corniflorae

Order Cornales

Family Garryaceae (1/1)

Garrya fadyenii Hook. Shrub to tree; pine forest to cloud forest (very common), 1650-2300 m; ± throughout pinelands and hardwood forests. Judd 4264, 4377, 4491, Thompson 3753-3, 3758-1.

Order Araliales

Family Araliaceae (including Apiaceae) (8/8)

Anethum graveolens L. Terrestrial herb; pine forest (uncommon), ca. 1910 m; pinelands near Park Center. Judd 4641. Introduced.

Daucus carota L. Terrestrial herb; pine forest, especially open disturbed areas (very common), 1800-2100 m; Morne la Visite toward Pic Cabaio, ± throughout pinelands. Judd 4936. Introduced.

Dendropanax arboreus (L.) Decne & Planch. Tree; cloud forest (common), 1660-1750 m; Riviere Blanche, ravine east of Berac area (east of Morne Nacel). Judd 4430.

Didymopanax tremulum Krug & Urb. Tree; cloud forest (very common), 1600-2250 m; Morne d'Enfer to M. la Visite, ravine east of Berac area, Riviere Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4392, 4727. Endemic to Hispaniola.

Hydrocotyle pusilla A. Rich. Terrestrial herb; pine forest (occasional), ca. 1800 m; near Riviere Blanche. Judd 4601.

Oreopanax capitatum (Jacq.) Decne. & Planch. Tree; pine forest to cloud forest (very common), 1700-2160 m;

Morne la Visite to Tete Opaque, Riviere Blanche, ravine east of Park Center, other ravines in pinelands. Baird LV-22, Judd 4310, 4452.

Pastinaca sativa L. Terrestrial herb; pine forest, especially disturbed areas (very common), 1750-2300 m; Morne la Visite to Pic Cabaio, + scattered in pinelands. Judd 4355. Introduced.

Petroselinum sativum Hoffm. Terrestrial herb; pine forest, especially disturbed areas (very common), 1750-2150 m; Morne la Visite, + scattered in pinelands. Judd 4354. Introduced.

Order Dipsacales

Family Adoxaceae (1/1)

Sambucus canadensis L. Shrub or small tree; pine forest to cloud forest, especially along streams (common), 1650-2050 m; Riviere Blanche, ravine east of Park Center, other ravines in pinelands, + scattered in pinelands (where planted near inhabited areas?). Judd 4291. Introduced.

Family Valerianaceae (1/1)

Valeriana scandens Loefl. Vine; cloud forest, moist pine forest (common), 1600-2150 m; ravine east of Berac area, Riviere Blanche, Morne la Visite. Judd 4533b, 4943.

Superorder Gentianiflorae

Order Gentianales

Family Buddlejaceae (1/1)

Buddleja dominicensis Urb. Shrub; cloud forest, moist pine forest (very common), 1600-2300 m; Morne d'Enfer to Pic Cabaio, ravine east of Berac area, Riviere Blanche, ravine east of Park Center, other ravines in pinelands. Judd 4410, 4570. Endemic to Hispaniola.

Family Rubiaceae (7/12)

Galium aparine L. Terrestrial herb; moist pine forest (occasional), ca. 1800 m; Riviere Blanche. Judd 4307. Introduced.

Galium brevipes Urb. Terrestrial herb; pine forest (occasional), 1750-1850 m; "The Depression". Judd 4484. Endemic to Hispaniola.

Guettarda or Psychotria sp. 3. Tree; cloud forest (occasional), ca. 1650 m; Riviere Blanche. Judd 4420.

Mitracarpus decumbens Urb. Terrestrial herb; pine forest (common), 1800-2050 m; + scattered in pinelands. Judd 4367. Endemic to Massif de la Selle.

Palicourea alpina (Sw.) DC. Shrub; moist pine forest, cloud forest (common), 1600-2250 m; Morne d'Enfer to M. la Visite, ravine east of Berac area, Riviere Blanche; Ekman, in field notes, also reports from Pic Cabaio. Judd 4529, 4588, 4946.

Psychotria berteriana DC. Shrub; cloud forest (uncommon), 1660-1735 m; Morne Fè Noir. Judd 4751.

Psychotria liogieri Steyermark. Shrub; cloud forest (occasional), ca. 1700 m; between Morne d'Enfer and M.

Fè Noir. Judd 4788, Skean 1057. Endemic to Hispaniola.

Psychotria baltenweckii Urb. Shrub; cloud forest (common), 1750-2050 m; Morne d'Enfer to M. la Visite, Riviere Blanche; Ekman also collected this species on M. Cabaio. Judd 4565, 4728, 4795. Endemic to Massif de la Selle.

Relbunium hypocarpium (L.) Hemsl. Terrestrial herb; moist pine forest (common), 1750-2150 m; southern slope of Morne la Visite, "The Depression". Judd 4488, 4530, Thompson 3748-4.

Rondeletia carnea Urb. & Ekm. Shrub to small tree; cloud forest, moist pine forest (uncommon), 1750-2200 m; Morne la Visite; Ekman also collected species on M. Cabaio. Judd 4554, 4822. Endemic to Massif de la Selle.

Rondeletia christii Urb. Shrub; cloud forest (occasional), ca. 1750 m; Riviere Blanche. Judd 4796. Endemic to Hispaniola; R. selleana Urb. & Ekm., described from the Morne la Visite region, is probably conspecific.

Rondeletia domatiata Urb. Shrub; cloud forest (occasional/common), 1800-1950 m; Morne d'Enfer. Judd 4683, 4710, 4714. Endemic to Massif de la Selle (Morne d'Enfer).

Family Apocynaceae (incl. Asclepiadaceae) (3/3)

Asclepias nivea L. Terrestrial herb; cloud forest, pine forest, disturbed open areas (occasional), 1600-1900 m; ravine east of Berac area; + scattered in pinelands. Judd 4945.

Cynanchum leptocladium (Decne.) Jiménez. Vine; cloud forest moist pine forest (occasional/common), 1650-1930 m; Morne d'Enfer to M. la Visite, "The Depression", Riviere Blanche. Judd 4689.

Marsdenia clausa R. Br. Vine; cloud forest (occasional), 1700-1900 m; Morne Fè Noir to M. Nacel, Riviere Blanche. Judd 4407, 4839.

Order Bignoniales

Family Bignoniaceae (1/1)

Tecoma stans (L.) Juss. Shrub; cloud forest (uncommon), ca. 1750 m; Riviere Blanche. Judd 4802. Introduced.

Family Scrophulariaceae (2/2)

Scrophularia minutiflora Pennell. Terrestrial herb; cloud forest, moist pine forest (occasional), 1850-2200 m; Morne d'Enfer to M. la Visite, Riviere Blanche. Judd 4533a, 4730.

Verbascum thapsus L. Terrestrial herb; pine forest, especially disturbed open areas (common), 1800-2150 m; southern slope of Morne la Visite, + scattered in pinelands. Judd 4571. Introduced.

Family Plantaginaceae (1/1)

Plantago lanceolata L. Terrestrial herb; pine forest, especially disturbed open areas (abundant), 1750-2300 m; southern slope of Morne la Visite to Pic Cabaio, + throughout pinelands. Judd 4876. Introduced.

Family Gesneriaceae (3/6)

Columnea domingensis Urb. Epiphytic vine; cloud forest (occasional), 1650-1850 m; Morne d'Enfer to ravine east of Berac area, Riviere Blanche. Judd 4436. (= Trichanthes domingensis (Urb.) Wiegler)

Gesneria hypoclada Urb. & Ekm. Shrub to small tree; cloud forest (rare), ca. 1750 m; Riviere Blanche. Judd 4798. Endemic to Massif de la Selle.

Gesneria viridiflora (Decaisne) Kuntz. Shrub; cloud forest (common), 1600-1900 m; Morne d'Enfer to ravine east of Berac area, Riviere Blanche. Judd 4427, 4437, 4704, 4767, 4956.

Gesneria sp. 1. Shrub; cloud forest (occasional), ca. 1900 m; Morne Fè Noir. Judd 4781.

Rhytidophyllum auriculatum Hook. Shrub; cloud forest, often disturbed open areas (common), 1650-1800 m; Morne d'Enfer to north slope of M. Nacel, Riviere Blanche. Judd 4447, 4648, 4761.

Rhytidophyllum sp. 2. Shrub; moist pine forest (common), 1700-2200 m; between Morne la Visite and Pic Cabaio, Riviere Blanche. Judd 4256, 4328.

Order Lamiales

Family Verbenaceae (4/4)

Citharexylum caudatum L. Shrub to tree; cloud forest, moist pine forest (occasional/common), 1650-2250 m; Morne d'Enfer to M. la Visite, Riviere Blanche, "The Depression". Judd 4477, 4757, 4790, 4797.

Duranta arida Britt. & Wils. Shrub; cloud forest (occasional/common), 2150-2220 m; vicinity of Pic Cabaio to Belle Fontaine/Roche Cabrit. Judd 4559, 4840.

Lantana trifolia L. Shrub; cloud forest, disturbed open areas (uncommon), ca. 1900 m; Morne Nacel. Judd 4705.

Verbena domingensis Urb. Terrestrial herb; pine forest (uncommon), 1800-1900 m; ± scattered in pinelands near Park Center; Ekman collected species at ca. 2200 m in vicinity of Pic Cabaio. Judd 4809. Endemic to Hispaniola.

Family Lamiaceae or Labiateae (5/7)

Hyptis schusteri Urb. Shrub; cloud forest (locally common), ca. 2300 m; Pic Cabaio. Judd 4551. Endemic to Massif de la Selle and Massif de la Hotte.

Prunella vulgaris L. Terrestrial herb; pine forest, especially open disturbed areas (common), 1750-2150 m; Morne la Visite, ± throughout pinelands. Judd 4348. Introduced.

Salvia foveolata Urb. & Ekm. Shrub; cloud forest/moist pine forest (uncommon), 2200-2300 m; between Morne la Visite and Pic Cabaio. Judd 4555. Endemic to Massif de la Selle (Morne la Visite-Pic Cabaio region).

Salvia selleana Urb. Shrub; pine forest, on thin soil over limestone (locally common), 2050-2100 m; Galette Seche; Ekman collected species at ca. 2250 m in vicinity of Pic Cabaio. Judd 4861. Endemic to Massif de la Selle.

Salvia tuerckheimii Urb. Shrub; cloud forest (occasional), ca. 2200-2300 m; vicinity of Pic Cabaio. Judd 4558. Endemic to Hispaniola.

Satureja viminea (L.) Urb. Shrub; cloud forest, moist pine forest (common), 1800-2300 m; Morne Nacel to Pic Cabaio. Judd 4321, 4521.

Stachys arvensis L. Terrestrial herb; moist pine forest, often along streams (occasional), 1800-1935 m; Riviere Blanche, ravine east of Park Center. Judd 4330, 4834. Introduced.

Superorder Solaniflorae

Order Solanales

Family Boraginaceae (3/6)

Cordia dependens Urb. & Ekm. Shrub; cloud forest, moist pine forest (occasional/common), 1800-2200 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Riviere Blanche, other ravines in pinelands, probably also at Tete Opaque. Judd 4655, 4844, Thompson 3748-10. Endemic to Hispaniola.

Cordia lima (Desv.) R. & Sch. Shrub; cloud forest, disturbed open area (uncommon), ca. 1850 m; Morne d'Enfer.

Cordia picardae Urb. Shrub; cloud forest, moist pine forest (common), Morne d'Enfer to Belle Fontaine/Roche Cabrit, Riviere Blanche, ravine east of Park Center, probably also at Tete Opaque. Judd 4509. Endemic to Massif de la Selle.

Cynoglossum amabile Stapf & Drummond. Terrestrial herb; pine forest, cloud forest, especially open disturbed areas (abundant), 1700-2300 m; ± throughout park. Various color forms present: blue, violet/pink, and white flowered. Baird LV-33, Judd 4371. Introduced.

Tournefortia glabra L. Shrub; cloud forest (uncommon), 1600-1650 m; ravine east of Berac area. Judd 4950.

Tournefortia hirsutissima L. Scrambling shrub; cloud forest (occasional), 1660-2200 m; Morne d'Enfer to ridge between M. la Visite and Pic Cabaio, Roche Plate, ravine east of Park Center. Judd 4510, 4768, Thompson 3753-11.

Family Solanaceae (4/10)

Cestrum brevifolium Urb. Shrub; cloud forest/moist pine forest (uncommon), ca. 1900 m; Riviere Blanche. Judd 4586. Endemic to Hispaniola.

Cestrum coelophlebiuum O. E. Schulz. Shrub; cloud forest, moist pine forest (common), 1650-2100 m; Morne d'Enfer to M. Nacel, Roche Plate, Riviere Blanche, ravine east of Park Center. Judd 4428, 4678, Thompson 3753-12. Endemic to Hispaniola.

Cestrum inclusum Urb. Shrub; cloud forest, moist pine forest (uncommon), 1850-1935 m; Morne d'Enfer, ravine east of Park Center. Judd 4671. Endemic to Hispaniola.

Cestrum mononeurum Urb. & Ekm. Shrub; cloud forest to pine forest (common), 1700-2300 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Roche Plate, Riviere Blanche, ravine east of Park Center, other ravines, + scattered in pinelands, probably also at Tete Opaque. Judd 4527, Thompson 3753-7. Endemic to Hispaniola.

Cestrum violaceum Urb. Shrub; cloud forest, moist pine forest (common), 1800-2300 m; Morne d'Enfer to Pic Cabaio, Roche Plate, Riviere Blanche. Judd 4261, 4545, Thompson 3753-9. Endemic to Massif de la Selle.

Datura suaveolens Humb. & Bonpl. ex Willd. Shrub or small tree; cloud forest, moist pine forest (occasional), 1700-1800 m; Riviere Blanche. Judd 4304. Introduced.

Physalis peruviana L. Terrestrial herb; moist pine forest (common), ca. 1700-1900 m; Riviere Blanche, + scattered in pinelands. Judd 4326. Introduced.

Solanum antillarum O. E. Schulz. Shrub; cloud forest, open disturbed areas (common), 1800-1950 m; Morne d'Enfer to M. Fè Noir(?). Judd 4661.

Solanum cotonoides Lam. Shrub; cloud forest, pine forest, especially disturbed open areas (very common), 1650-2300 m; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Riviere Blanche, ravine east of Park Center, other ravines, + scattered in pinelands, probably also at Tete Opaque. Judd 4421, 4831.

Solanum umbellatum Mill. Shrub; cloud forest, especially disturbed open areas (occasional/common), 1700-1900 m; Morne Nacel, Riviere Blanche. Judd 4396, 4805.

Order Campanulales

Family Campanulaceae (2/3)

Lobelia assurgens L. var. santa-clarae McVaugh. Shrub; cloud forest (very common), 1600-2300 m; Morne d'Enfer to Pic Cabaio, ravine east of Berac area, Riviere Blanche, ravine east of Park Center, other ravines. Judd 4389. Probably also including L. robusta Graham, a very closely related or possibly conspecific taxon.

Lobelia rotundifolia Juss. Scrambling shrub; cloud forest (occasional), 1800-2300 m; Morne d'Enfer to M. Fè Noir, north slope of M. la Visite. Judd 4516, 4539, 4711.

Siphocampylus caudatus McVaugh. Shrub; cloud forest (occasional), 1900-1950 m; Morne Nacel to M. la Visite; Ekman collected near Pic Cabaio at ca. 2300 m. Endemic to Massif de la Selle. (= Lobelia ekmanii Urb.)

Superorder Asteriflorae

Order Asterales

Family Asteraceae or Compositae (19/25)

Baccharis myrsinifolia (Lam.) Pers. Shrub; pine forest (abundant), cloud forest (occasional), 1650-2300 m; Morne d'Enfer to Pic Cabaio, Riviere Blanche, other ravines, + throughout pinelands. Judd 4286, 4333, Thompson 3748-2. Endemic to Hispaniola.

Bidens alba (L.) DC. Terrestrial herb; pine forest, open disturbed areas (occasional), 1800-2120 m; southern

slope of Morne la Visite, ± scattered in pinelands.
Judd 4357. Introduced.

Chaptalia albicans Urb. & Ekm. Terrestrial herb; moist pine forest, open rocky areas (occasional/common), 1750-1900 m; Riviere Blanche, ± scattered in pinelands. Judd 4257, 4329, 4496.

Conyza canadensis (L.) Cronq. var. pusilla (Nutt.) Cronq. Terrestrial herb; pine forest, open disturbed areas, fields (common), 1800-1900 m; ± scattered in pinelands. Judd 4937.

Erigeron dissectus Urb. Terrestrial herb; moist pine forest, moist rocky cliffs (common), 1700-1900 ml Riviere Blanche. Judd 4469. Endemic to Hispaniola.

Erigeron karwinskyanus DC. Terrestrial herb; pine forest (abundant), cloud forest, disturbed open areas (occasional), 1700-2300 m; Morne d'Enfer, M. la Visite to Pic Cabaio, ± throughout pinelands. Judd 4369.
Introduced.

Eupatorium cabaionum Urb. & Ekm. Shrub; pine forest, especially rocky areas, cloud forest (common), 1660-2300 m; Morne d'Enfer to Pic Cabaio, "The Depression", ± scattered in pinelands. Judd 4487, 4643, 4759.
Endemic to Massif de la Selle.

Eupatorium illitum Urb. Shrub; pine forest (very common), cloud forest, disturbed open areas (occasional), 1700-2300 m; Morne d'Enfer to Pic Cabaio, Riviere Blanche, other ravines, ± throughout pinelands. Judd 4299, 4553, 4713, 4722. Endemic to Hispaniola.

Eupatorium sp. nov. A(2). Shrub; cloud forest, disturbed open areas (occasional), 1700-1900 m; Morne Fè Noir. Judd 4777. Endemic to Massif de la Selle.

Gnaphalium domingense Lam. Terrestrial herb; pine forest (occasional), 1800-2000 m; ± scattered in pinelands. Judd 4836.

Gnaphalium eggersii Urb. Terrestrial herb; pine forest (occasional), 1800-1900 m; Riviere Blanche, ± scattered in pinelands. Judd 4320. Endemic to Hispaniola.

Gnaphalium selleanum Urb. & Ekm. Terrestrial herb; cloud forest, disturbed open areas (common), ca. 2300 m; Pic Cabaio; Ekman collected species on Morne la Visite, ca. 1800-1900 m. Judd 4550. Endemic to Massif de la Selle.

Hieracium gronovii L. Terrestrial herb; pine forest (common), 1800-2050 m; ± throughout pinelands. Judd 4364.

Lampsana communis L. Terrestrial herb; pine forest, cloud forest, disturbed open areas (common), 1600-2050 m; ravine east of Berac area, ± throughout pinelands. Judd 4361, 4951. Introduced.

Leontodon taraxacoides (Vill.) Merat. Terrestrial herb; pine forest (very common), 1800-2050 m; ± throughout pinelands. Judd 4370, 4878. Introduced.

Leucanthemum vulgare Lam. Terrestrial herb; pine forest, open disturbed areas, pasture (locally common), 2100-

- 2200 m; Pic Cabaio to Belle Fontaine/Roche Cabrit, and adjacent pinelands. Judd 4855. Introduced.
- Mikania tripartita Urb. Vine; cloud forest, moist pine forest (common), 1750-2120 m; Morne d'Enfer, to M. la Visite, "The Depression". Judd 4479. Endemic to Massif de la Selle.
- Piqueria trinervia Cav. Terrestrial herb; cloud forest/moist pine forest (occasional), 2200-2300 m; vicinity of Pic Cabaio. Judd 4543.
- Senecio buchii Urb. Shrub; cloud forest, moist pine forest (occasional/very common), 1700-2300 m; Morne d'Enfer, M. la Visite to Belle Fontaine/Roche Cabrit, Riviere Blanche, ravine east of Park Center, probably also at Tete Opaque. Judd 4263, 4305, 4548, 4715, Thompson 3748-8. Endemic to Massif de la Selle.
- Senecio picardae Krug & Urb. Shrub; pine forest, cloud forest, open areas (common), 1800-2300 m; vicinity of Pic Cabaio to Belle Fontaine/Roche Cabrit, Riviere Blanche, ravine east of Park Center. Judd 4322, 4542. Endemic to Hispaniola.
- Sonchus asper (L.) Hill. Terrestrial herb; cloud forest, disturbed open areas (common), 1600-1650 m; ravine east of Berac area. Judd 4952. Introduced.
- Taraxicum officinale Weber. Terrestrial herb; pine forest, open disturbed areas, fields (common), 1800-2050 m; ± scattered in pinelands. Judd 4960. Introduced.
- Tragopogon pratensis L. Terrestrial herb; moist pine forest/cloud forest, disturbed open areas, fields (occasional), 1750-1800 m; near Riviere Blanche. Judd 4416. Introduced.
- Vernonia? sp. 4. Scrambling shrub; moist pine forest (common), ca. 2180 m; ridge between Morne la Visite and Pic Cabaio. Judd 4511.
- Wedelia serrata L. C. Rich. Terrestrial herb; cloud forest, disturbed open areas (uncommon), 1850-1880 m; Morne d'Enfer. Judd 4679.

Superorder Liliiflorae

Order Liliales

Family Agavaceae (1/1)

Agave antillarum Desc. Succulent herb; pine forest, cloud forest, open rocky areas (very common), 1750-2300 m; Morne la Visite to Pic Cabaio, Riviere Blanche, other ravines, ± throughout pinelands, especially rocky areas. Judd 4384. Endemic to Hispaniola.

Family Smilacaceae (1/1)

Smilax havanensis Jacq. Vine; moist pine forest (occasional), 1750-1800 m; "The Depression". Judd 4475.

Family Dioscoreaceae (1/1)

Rajania ovata Sw. Vine; cloud forest (occasional), 1700-1900 m; Morne Fè Noir, Riviere Blanche. Judd 4782, 4803.

Family Orchidaceae

[Family treatment by D. Dod; he collected 11 species in the park, and reported that some 40 species are known from the region; additional study of the orchid flora of the park clearly is needed.]

Superorder Areciflorae

Order Arecales

Family Arecaceae or Palmae (1/1)

Prestoea montana (R. Grah.) Nichols. Tree; cloud forest (rare), 1600-1650 m; ravine east of Berac area; Ekman collected species on Morne Cabaio. Judd 4954. (= Euterpe globosa Gaertn.)

Superorder Commeliniflorae

Order Bromeliales

Family Bromeliaceae (2/5)

Tillandsia caribaea L. B. Smith. Epiphytic herb; cloud forest (occasional/common), 1600-2250 m; Morne d'Enfer to Morne la Visite (northern slope), Riviere Blanche. Judd 4309, 4688.

Tillandsia hotteana Urb. Epiphytic herb; moist pine forest, cloud forest (occasional), 1650-2050 m; Morne la Visite, Riviere Blanche, "The Depression". Judd 4456, 4495. Endemic to Hispaniola.

Tillandsia usneoides L. Epiphytic herb; moist pine forest (uncommon), ca. 1900 m; Riviere Blanche. Judd 4829.

Vriesea incurva (Griseb.) Read. Epiphytic herb; moist pine forest (uncommon), 1750-1800 m; "The Depression". Judd 4462. Det. T. Zanoni.

Vriesea sintenisii (Bak.) L. B. Smith. Epiphytic herb; cloud forest, moist pine forest (occasional/abundant), 1600-2250 m; Morne d'Enfer to slightly east of Morne la Visite, Riviere Blanche. Judd 4308, 4424, 4524.

Order Commelinales

Family Cyperaceae (3/3)

Carex ekmanii Kuk. Terrestrial herb; pine forest (very common), 1800-2150 m; Morne la Visite, ± throughout pinelands. Judd 4379. Endemic to Hispaniola.

Cyperus picardae Boeckl. Terrestrial herb; pine forest (abundant), 1750-2200 m; Morne la Visite, Riviere Blanche, ± throughout pinelands. Judd 4405. Endemic to Hispaniola.

Uncinia hamata (Sw.) Urb. Terrestrial herb; moist pine forest (common), 1800-2150 m; Morne la Visite. Judd 4534.

Family Poaceae or Gramineae (11/14) [collections identified by Dr. David W. Hall, except where otherwise indicated]

Andropogon glomeratus (Walt.) BSP. var. pumilis Vasey.

Terrestrial herb; pine forest (common), 1750-2150 m; Morne la Visite, ± throughout pinelands. Judd 4343.

Andropogon urbanianus Hitchc. Terrestrial herb; pine forest, open cloud forest (very common/abundant), 1750-2300 m; Morne la Visite to Pic Cabaio, ± throughout pinelands. Judd 4375, 4544. Endemic to Hispaniola.

- Arthrostylidium haitiense (Pilger) Hitchc. & Chase. Climbing bamboo; cloud forest, moist pine forest (common/abundant), 1600-2150 m; between Morne d'Enfer and M. Fè Noir, to M. la Visite, ravine east of Park Center. Judd 4755. Endemic to Hispaniola.
- Arthrostylidium multispicatum Pilger. Climbing bamboo; cloud forest (abundant), 1650-1750 m; Riviere Blanche. Judd 4394.
- Bromus unioloides (Willd.) HBK. Terrestrial herb; pine forest (common), 1800-2050 m; ± throughout pinelands. Judd 4380. Introduced.
- Chusquea abietifolia Griseb. Climbing bamboo; pine forest to cloud forest (occasional/abundant), 1650-2100 m; between Morne d'Enfer and M. Fè Noir, to M. la Visite, Riviere Blanche, other ravines, ± scattered in pinelands. Judd 4346, 4391, 4769, 4789, 4863. One collection identified by Dr. T. Soderstrom; species shows great variation in leaf width.
- Danthonia domingensis Hack. & Pilger. Terrestrial herb; pine forest (locally abundant), 1700-2150 m; "The Depression", pinelands between Galette Seche and Pic Cabaio; Ekman collected species on Morne la Visite. Judd 4474. Endemic to Hispaniola.
- Isachne rigidifolia (Poir.) Urb. Terrestrial herb; pine forest, open areas in cloud forest (common/abundant), 1750-2300 m; Morne la Visite to Pic Cabaio, Riviere Blanche, other ravines, ± throughout pinelands. Judd 4368.
- Lolium perenne L. Terrestrial herb; pine forest, cloud forest, open disturbed areas, fields (common), 1800-2250 m; ± throughout plateau. Judd 4549, 4962. Introduced.
- Melinis minutiflora Beauv. terrestrial herb; pine forest, cloud forest, especially disturbed open areas (common), 1750-1950 m; Riviere Blanche, ± scattered in pinelands. Judd 4406, 4963. Introduced.
- Panicum xalapense HBK. Terrestrial herb; pine forest (common/abundant), 1750-2150 m; Morne la Visite, ± throughout pinelands. Judd 4365, 4883.
- Poa annua L. Terrestrial herb; moist pine forest, especially rocky areas along streams (common), 1800-2000 m; Riviere Blanche, other ravines. Judd 4297. Introduced.
- Poa compressa L. Terrestrial herb; pine forest, especially open disturbed areas (common), 1800-1900 m; ± scattered in pinelands. Judd 4884. Introduced.
- Zeugites americana Willd. Terrestrial herb; moist pine forest (occasional), 1800-2150 m; northern slope of Morne la Visite, Riviere Blanche. Judd 4302.

Mosses and liverworts collected in Macaya National Park, and adjacent areas of the Massif de la Hotte, Haiti.

Division Bryophyta [all collections identified by Dana Griffin, III, unless otherwise indicated]

Family Amblystegiaceae

Campylium chrysophyllum (Brid.) J. Lange. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3692, 3813, 3844a.

Family Bartramiaceae

Leiomela bartramoides (Hock.) Par. Moist pine forest/cloud forest; Morne Formon. Skean 1485.

Philonotis uncinata (Schwaegr.) Brid. Moist pine forest/cloud forest; Morne Formon. Judd 3747.

Family Brachytheciaceae

Brachythecium stereopoma (Spruce ex Mitt.) Jaeg. Moist forest on limestone; Bois Formon. Skean 1285a.

Homalothecium leskeoides (Hedw.) Robins. Moist pine forest/cloud forest; Morne Formon. Judd 3825, Skean 1546.

Lepyrodontopsis trichophylla (Hedw.) Broth. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon (?), Pic Macaya. Judd 3611c, Skean 1481.

Family Bryaceae

Anomobryum filiforme (Dicks.) Husn. Moist pine forest/cloud forest; Morne Formon. Judd 3777, 3783.

Bryum argenteum Hedw. Moist pine forest/cloud forest; Morne Formon. Judd 3844b.

Bryum cruegeri Hampe ex C. Müll. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, southern slopes of Morne Formon, Morne Cavalier. Judd 3994, 4058b.

Bryum cf. pseudotriquetrum (Hedw.) Gaertn. Moist forest on limestone; lower southern slopes of Morne Formon. Judd 3689. Det. William C. Steere.

Family Calymperaceae

Syrrhopodon incompletus Schwaegr. Moist forest on limestone; Bois Formon. Skean 1219p.p.

Family Daltoniaceae

Callicosta affinis (Hook.) C. Müll. Moist forest on limestone; Bois Formon. Judd 3569c, 3575, 3611b.

Callicosta cristatum (Mitt.) Crosby. Moist forest on limestone; Bois Formon. Judd 3601.

Callicosta fendleri (C. Müll.) Crosby. Moist forest on limestone; Bois Formon. Judd 3611a.

Lepidopilum antillarum Mitt. Moist forest on limestone; Bois Formon. Skean 1215. Det. William C. Steere.

Lepidopilum muelleri (Hampe) Spruce. Moist forest on limestone; Bois Formon. Judd 3595.

Lepidopilum scabrisetum (Schwaegr.) Steere. Moist forest on limestone; Bois Formon. Skean 1218. Det. William C. Steere.

- Lepidopilum tortifolium Mitt. Moist forest on limestone; Bois Formon. Judd 3562, 3582.
- Family Dicranaceae (including Leucobryaceae)**
- Attractyllocarpus longisetus (Hook.) Bartr. Moist pine forest/cloud forest; Pic Macaya. Judd 4191.
- Campylopus capitulatus Bartr. Moist pine forest/cloud forest; Morne Formon. Judd 3874a.
- Campylopus cf. cubensis Sull. Moist pine forest/cloud forest; Morne Formon. Pic Macaya. Judd 3778, 4196. Det. William C. Steere.
- Campylopus filifolius (Hornschr.) Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3872a, 3874b.
- Campylopus fragilis (Brid.) B.S.G. Moist pine forest/cloud forest; Morne Formon. Judd 3872b. Det. William C. Steere.
- Campylopus underwoodii R. S. Williams. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 4101, 4201. Det. William C. Steere.
- Campylopus (sterile) sp. Moist pine forest/cloud forest; Morne Formon. Judd 4099. Det. William C. Steere.
- Dicranella perrottetii (Mont.) Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3882.
- Holomitrium calycinum (Hedw.) Mitt. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3827a, 4072, 4183.
- Leucobryum albicans (Schwaegr.) Mitt. Moist pine forest; Morne Formon. Skean 1519.
- Leucobryum albidum (Brid.) Lindb. Moist pine forest; Pic Macaya. Judd 4170.
- Leucobryum antillarum Schimp. ex Besch. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3554, 3596, 3609, 3752.
- Leucoloma serrulatum Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3605, 3871b.
- Family Ditrichaceae**
- Ditrichum rufescens (Hampe) Broth. Moist pine forest/cloud forest; Morne Formon. Judd 3875.
- Family Entodontaceae**
- Entodon macropodus (Hedw.) C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 3823a, Skean 1380d.
- Family Fissidentaceae**
- Fissidens asplenioides Hedw. Moist forest on limestone; Bois Formon. Skean 1219p.p.
- Fissidens cristatus Wils. ex Mitt. Moist pine forest/cloud forest; Pic Macaya. Judd 4171, 4210, Skean 1410a, 1411, 1419.
- Fissidens polypodioides Hedw. Moist pine forest/cloud forest; Morne Formon. Judd 3704, 3719, 3779, 3907.
- Fissidens semiliretis Sull. Moist forest on limestone; Bois Formon. Judd 3573b, 3615.
- Family Funariaceae**

Funaria hygrometrica Hedw. var. calvescens (Schwaegr.) Mont.
Moist pine forest/cloud forest; Morne Formon. Judd
3745b, 3900.

Family Hookeriaceae

Adelothecium bogotense (Hampe) Mitt. Moist pine forest/
cloud forest; Morne Formon. Judd 3826.

Cyclodictyon varians (Sull.) Broth. Moist pine forest/
cloud forest; Morne Formon. Judd 3910.

Hemiragis aurea (Brid.) Kindb. Moist forest on limestone;
Bois Formon. Judd 3557, Skean 1217, 1255.

Hookeria acutifolia Hook. Moist pine forest/cloud forest;
Morne Formon. Judd 3897.

Hookeriopsis obsoletinervis Thér. Moist forest on
limestone; Bois Formon. Judd 3608b.

Hookeriopsis sp. Moist pine forest/cloud forest; Morne
Formon. Skean 1492b.

Hypopterygium tamariscinum (Hedw.) Brid. Moist pine forest/
cloud forest; Morne Formon, Pic Macaya. Judd 3909,
4173, 4211.

Family Hypnaceae

Ctenidium malacodes Mitt. Moist pine forest/cloud forest;
Morne Formon. Skean 1380e, 1491.

Ectropothecium globitheca (C. Müll.) Mitt. Moist forest on
limestone; Bois Formon. Judd 3920.

Hypnum polypterum (Mitt.) Broth. Moist pine forest/cloud
forest; Morne Formon, Pic Macaya. Judd 3800, 3842,
4071, Skean 1380c.

Mittenothamnium reptans (Hedw.) Card. Moist pine forest/
cloud forest; Morne Formon, Pic Macaya. Judd 3749,
3822, 4223.

Family Lembophyllaceae

Porotrichodendrum superbum (Tayl.) Broth. Moist pine
forest/cloud forest; Morne Formon. Judd 3823b.

Family Meteoriaceae

Aerobryopsis mexicana Card. Moist forest on limestone; Bois
Formon. Judd 3578. Det. William C. Steere.

Barbella cubensis (Mitt.) Broth. Moist forest on limestone;
Bois Formon. Skean 1317, 1318.

Meteoridium remotifolium (C. Müll.) Manuel. Moist forest on
limestone; Bois Formon. Judd 3551, 3698.

Meteoriump illecebrum (C. Müll.) Mitt. Moist forest on
limestone, moist vine forest/cloud forest; Bois Formon,
Morne Formon. Judd 3678, 4074.

Papillaria imponderosa (Tayl.) Broth. Moist forest on
limestone, moist pine forest/cloud forest; Bois Formon,
Morne Formon. Judd 3843a, 3924, Skean 1480.

Papillaria penicillata (Dozy & Molkenb.) Broth. Moist pine
forest/cloud forest; Morne Formon. Judd 3745c.

Pilotrichella flexilis (Hedw.) Jaeg. Moist pine forest;
cloud forest; Morne Formon, Pic Macaya. Judd 3775,
3782, 3898, 4070, 4169, Skean 1454.

Pilotrichella hexasticha (Schwaegr.) Jaeg. Moist forest on
limestone, moist pine forest/cloud forest; Bois Formon,
Morne Formon. Judd 3564, 3812.

Pilotrichella pentasticha (Brid.) Wijk. & Marg. Moist forest on limestone; Bois Formon. Judd 3680a, Skean 1285b.

Squamidium nigricans (Hook.) Broth. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3799, 3923.

Family Mniaceae

Plagiomnium rhynchophorum (Hook.) T. Kop. Moist cloud forest/cloud forest; Morne Formon. Judd 3912a, 4098, D. Cordier s.n.

Family Neckeraceae

Porotrichum fasciculatum (Hedw.) Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3911, Skean 1482.

Porotrichum insularum Mitt. Moist pine forest/cloud forest; Morne Formon. Skean 1488.

Family Orthotrichaceae

Grottiella mucronifolia (Hook. & Grev.) Crum & Steere. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3679, 3798.

Macrocoma tenue (Hook. & Grev.) Vitt subsp. sullivantii (C. Müll.) Vitt. Moist forest on limestone, Bois Formon. Judd 3690.

Macromitrium cirrosum (Hedw.) Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3516, 3565, 3588, 3589, 3590, 3722, 3780.

Macromitrium homalacron C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 4100.

Macromitrium longifolium (Hook.) Brid. Moist pine forest/cloud forest; Pic Macaya. Judd 4208, Skean 1418.

Macromitrium scoparium Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3874c.

Macromitrium stratosum Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3821, 3876 4073.

Schlotheimia jamsonii (Arn.) Brid. Moist forest on limestone; Bois Formon. Judd 3571.

Schlotheimia tecta Hook.f. & Wils. Moist pine forest/cloud forest; Morne Formon. Judd 3827b, 3904, Skean 1420.

Family Phyllogoniaceae

Phyllogonium fulgens (Hedw.) Brid. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3559, 3604, 3685, 3902, 4069, Skean 1383, 1545.

Family Polytrichaceae

Pogonatum robustum Mitt. Moist pine forest/cloud forest; Pic Macaya; described by Thériot (1944) as P. ekmanii, from Pic Formon. Judd 4192, 4203, Skean 1465.

Pogonatum tortile P.-Beauv. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3774, 3925.

Polytrichum juniperinum Hedw. Moist forest on limestone, moist pine forest; Bois Formon, Morne Formon. Judd 3695, 3708, 3787, 3843b, Skean 1547.

Family Pottiaceae

- Anoectangium aestivum (Hedw.) Mitt. Moist forest on limestone; Bois Formon. Judd 3921.
- Barbula arcuata Griff. Moist pine forest; Morne Formon. Judd 3841b.
- Barbula hispaniolensis Buck & Steere. Moist pine forest; Morne Formon. Judd 3841a.
- Barbula sp. Moist pine forest; Morne Formon. Judd 3745a.
- Hymenostylium recurvirostrum (Hedw.) Dix. Moist pine forest/cloud forest; Morne Formon. Judd 3811.
- Leptodontium viticulosoides (P.-Beauv.) Wijk. & Marg. Moist pine forest/cloud forest. Judd 4094, 4175.
- Pseudosymblepharis schimperianus (Paris) Crum. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Pic Macaya. Judd 3573a, Skean 1456. Det. William C. Steere (3573).
- Trichostomum sublamprothecium Paris. Moist pine forest/cloud forest; Pic Macaya. Skean 1455.
- Weissia jamaicensis (Mitt.) Grout. Moist forest on limestone, pine forest; Bois Formon, Morne Formon. Judd 3797, 3848, 3922.
- Family Prinodontaceae**
- Prinodon densus (Hedw.) C. Müll. Moist forest on limestone; Bois Formon. Judd 3686.
- Family Pterobryaceae**
- Pirella filicina (Hedw.) Card. Moist forest on limesotne; Bois Formon. Judd 3572, 3584, 3591, 3603.
- Pterobryon densum (Schwaegr.) Hornsch. Moist forest on limestone; Bois Formon. Judd 3696.
- Family Racopilaceae**
- Racopilum tomentosum (Hedw.) Brid. Moist forest on limestone; Bois Formon. Judd 3555a.
- Family Rhizogoniaceae**
- Hymenodon aeruginosus (Hook.f. & Wils.) C. Müll. Moist pine forest/cloud forest; Morne Formon. Judd 3871a.
- Rhizogonium spiniforme (Hedw.) Bruch. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3561a, 3583, 3700, 3751, Skean 1520.
- Family Sematophyllaceae**
- Sematophyllum insularum (Sull.) Mitt. Moist pine forest/cloud forest; Morne Formon. Judd 3707.
- Sematophyllum lamprophyllum Mitt. Moist forest on limestone; Bois Formon. Judd 3608a, 3691.
- Sematophyllum lindigii (Hampe) Mitt. Moist pine forest/cloud forest; Pic Macaya. Judd 4182.
- Family Sphagnaceae**
- Sphagnum magellanicum Brid. Moist pine forest/cloud forest; Morne Formon. Judd 4096.
- Sphagnum meridense (Hampe) C. Müll. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3720, 3869, 4095, 4184, 4199, s.n.
- Sphagnum subsecundum Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4195.

Sphagnum sp. Moist pine forest; Pic Macaya. Skean 1409.
Det. William C. Steere.

Family Thuidiaceae

Thuidium urceolatum Lor. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon, Pic Macaya. Judd 3566, 3594, 3597, 3614b, 3677, 3749, 3786, 3905, Skean 1380a.

Division Hepatophyta

Family Cephaloziaceae

Nowellia evansii Grolle. Moist pine forest/cloud forest; Morne Formon. Judd 4094b. Det. Jiri Vana.

Family Dilaenaceae

Pallavicinia lyellii (Hook.) S. Gray. Moist pine forest/cloud forest; Morne Formon. Judd 3903.

Symphyogyna broginartii Mont. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3870, Skean 1421.

Family Frullaniaceae

Frullania atrosanguinea Taylor ex Spruce. Moist pine forest/cloud forest; Morne Formon. Skean 1380b.

Frullania ericoides Nees. Moist forest on limestone; Bois Formon. Judd 3960.

Frullania sp. Moist pine forest; Pic Macaya. Judd 4206.

Family Grimuldiaceae

Asterella sp. Moist pine forest/cloud forest; Morne Formon. Skean 1384.

Family Harpanthaceae

Leptoscyphus amphibolius (Nees) Grolle. Moist pine forest/cloud forest; Pic Macaya. Judd 4205. Det. Jiri Vana.

Family Jungermanniaceae

Jamesoniella rubricaulis Nees. Moist forest on limestone; Bois Formon. Judd 3684.

Family Lejeuneaceae

Bryopteris fruticolosa Taylor. Moist forest on limestone; Bois Formon. Judd 3569a, 3593, 3613, 3614a, Skean 1254.

Ceratolejeunea brevinervis (Spruce) Evans. Moist forest on limestone; Bois Formon. Judd 3602.

Cheilolejeunea inflexa (Hampe ex Lehm.) Grolle. Moist forest on limestone; Bois Formon. Judd 3612b. Det. R. Grolle.

Drepanolejeunea anoplantha (Spruce) Steph. Moist forest on limestone; Bois Formon. Judd 3612a. Det. R. Grolle.

Hygrolejeunea reflexistipula (Lehm. & Lindenb.) Schiffn. Moist pine forest/cloud forest; Morne Formon. Judd 3825b. Det. R. Grolle.

Macrolejeunea sessiliflora Steph. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3825a, Skean 1220.

Marchesinia brachiata Schiffn. Moist forest on limestone; Bois Formon. Judd 3675, 3695b. Det. R. Grolle.

- Neurolejeunea breutelii (Gott.) Evans. Moist forest on limestone; Bois Formon. Judd 3567.
- Odontolejeunea sieberiana (Gott.) Schiffn. Moist forest on limestone; Bois Formon. Judd 4591b. Det. R. Grolle. Lejeuneaceae indet. Moist forest on limestone; Bois Formon. Judd 3555b.
- Family Lepidoziaceae**
- Bazzania cf. longa (Nees) Trev. Moist pine forest/cloud forest; Pic Macaya. Judd 4174.
- Bazzania sp. Moist pine forest/cloud forest; Pic Macaya. Judd 4176, 4198, Skean 1413.
- Lepidozia cupressina (Sw.) Lindenb. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 3825, 4181.
- Lepidozia munchiana Steph. Moist pine forest/cloud forest; Pic Macaya. Judd 4179.
- Lepidozia patens Lindenb. Moist pine forest/cloud forest; Morne Formon. Judd 3723, 3837c, 3879.
- Micropterygium trachyphyllum Nees. Moist forest on limestone; Bois Formon. Judd 3560.
- Family Lophocoleaceae**
- Heteroscyphus combinatus (Nees) Schiffn. Moist pine forest/cloud forest; Morne Formon. Judd 3824.
- Lophocolea coadunata (Sw.) Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4186.
- Lophocolea muricata (Lehm.) Nees. Moist pine forest/cloud forest; Pic Macaya. Judd 4185.
- Lophocolea trapezoidea Mont. Moist pine forest/cloud forest; Morne Formon, Pic Macaya. Judd 4094a, 4177. Det. Jiri Vana.
- Family Marchantiaceae**
- Dumontiera hirsuta (Sw.) Nees. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3908, Skean 1214, 1385, 1483.
- Marchantia polymorpha L. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, lower southern slopes of Morne Formon, M. Cavalier. Judd 3697, 4059.
- Family Metzgeriaceae**
- Metzgeria sp. Moist pine forest/cloud forest; Morne Formon. Judd 3901.
- Family Monocleaceae**
- Monoclea sp. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon. Judd 3558, 3908b.
- Family Plagiochilaceae**
- Plagiochila bursata (Desv.) Lindenb. Moist forest on limestone, moist pine forest/cloud forest; Bois Formon, Morne Formon (?), Pic Macaya. Skean 1223, 1416, 1423, 1424.
- Plagiochila cristata (Sw.) Dum. Moist pine forest/cloud forest; Morne Formon. Judd 3878a.
- Plagiochila jamesonii Tayl. Moist pine forest/cloud forest; Morne Formon. Judd 3899.
- Plagiochila spp. Various habitats and localities. Judd 3581, 3585, 3617, 3630b, 3687, 3688, 3699, 3701b, 3705,

3721, 3776, 3906, 4188, 4189, 4193, 4207, Skean 1222,
1415, 1417, 1422, 1480, 1484, 1490, 1492a, 1521.
Tylianthus approximatus (Lindenb.) Spruce. Moist pine
forest/cloud forest; Pic Macaya. Judd 4197. Det. R.
Grolle.

Family Porellaceae

Porella swartziana (Web.) Trev. Moist pine forest/cloud
forest; Morne Formon. Judd 3824b.

Family Ptilidiaceae

Heberta divergens (Steph.) Heiz. Moist forest on limestone;
Bois Formon. Judd 3568.

Herberta juniperoides (Sw.) Grolle. Moist pine forest/
cloud forest; Pic Macaya. Judd 4180, Skean 1414.

Heberta peuselis (Tayl.) Spruce. Moist pine forest/cloud
forest; Morne Formon, Pic Macaya. Judd 3877, Skean
1412.

Trichocolea sp. Moist forest on limestone, moist pine
forest/cloud forest; Bois Formon, Morne Formon, Pic
Macaya. Judd 3702, 3785, 4209, Skean 1487.

Family Radulaceae

Radula cubensis Yamada. Moist forest on limestone; Bois
Formon. Judd 3703. Det. Kohsaku Yamada.

Radula floridana Castle. Moist forest on limestone; Bois
Formon. Judd 3610. Det. Kohsaku Yamada.

Radula inflexa Gott. ex Steph. Moist forest on limestone,
moist pine forest/cloud forest; Bois Formon, Pic
Macaya. Judd 3610b, 4200. Det. Kohsaku Yamada.

Radula sp. nov. (to be described by K. Yamada). Moist
forest on limestone; Bois Formon. Judd 3577, 3578,
3592, Skean 1221. Det. Kohsaku Yamada.

Radula microlobula Castle. Moist forest on limestone; Bois
Formon. Skean 1216. Det. Kohsaku Yamada.

Family Riccardiaceae

Riccardia sp. Moist pine forest/cloud forest; Pic Macaya.
Judd 4178.

Family Scapaniaceae

Scapania portoricensis H. & G. Moist pine forest/cloud
forest; Pic Macaya. Skean 1410b.

Mosses and liverworts collected in La Visite National Park,
and adjacent areas of the Massif de la Selle, Haiti.

Division Bryophyta [all collections identified by Dana
Griffin, III, unless otherwise indicated]

Family Amblystegiaceae

Campylium chrysophyllum (Brid.) J. Lange. Moist pine
forest, moist sinkhole vegetation; Riviere Blanche,
Truing Marassa. Judd 4606a, 4633.

Leptodictyum riparium (Hedw.) Warnst. Moist pine forest,
cloud forest; Riviere Blanche. Judd 4594, 4609.

Platyhypnidium riparioides (Hedw.) Dix. Moist pine forest,
cloud forest; Morne d'Enfer to M. Fè Noir, Riviere
Blanche. Judd 4590, 4772.

Family Bartramiaceae

Breutelia brittoniae Ren. & Card. Cloud forest; Pic Cabaio.
Judd 4556.

Breutelia tomentosa (Brid.) Jaeg. Moist pine forest/cloud
forest; Morne la Visite. Judd 4536.

Philonotis hastata (Dub.) Wijk. & Marg. Moist pine forest;
Riviere Blanche. Judd 4608.

Philonotis longisetia (Michx.) Britt. Moist pine forest;
Riviere Blanche. Judd 4276, 4282, 4606c.

Family Brachytheciaceae

Homalothecium leskeoides (Hedw.) Robins. Pine forest, cloud
forest, moist sinkhole vegetation; between Morne
d'Enfer and M. Fè Noir, Truing Marassa, + scattered in
pinelands. Judd 4387a, 4617, 4774.

Rhynchostegium scariosum (Tayl.) Jaeg. Moist vegetation of
sinkhole; Truing Marassa. Judd 4615.

Family Bryaceae

Bryum argenteum Hedw. Pine forest, open areas in cloud
forest; Pic Cabaio, Galette Seche. Judd 4557, 4864,
4866.

Bryum limbatum C. Müll. Moist pine forest; Riviere Blanche.
Judd 4604. Det. William C. Steere.

Bryum (sterile) sp. Pine forest; Galette Seche. Judd
4868b. Det. William C. Steere.

Rhodobryum domingense (Brid.) Besch. Moist pine forest;
"The Depression". Judd 4635.

Family Calymperaceae

Syrrhopodon gaudichaudii Mont. Cloud forest; Morne d'
Enfer. Judd 4737b.

Family Dicranaceae (incl. Leucobryaceae)

Campylopus fragilis (Brid.) B.S.G. Cloud forest; Morne
d'Enfer. Judd 4737a. Det. William C. Steere.

Dicranum frigidum C. Müll. Cloud forest/moist pine forest;
vicinity of Pic Cabaio. Judd 4828.

Dicranum sumichrasti Duby. Moist pine forest; "The
Depression". Judd 4634.

Leucobryum antillarum Schimp. ex Besch. Cloud forest; Morne
d'Enfer. Judd 4733.

Family Entodontaceae

Entodon hampeanus C. Müll. Cloud forest; Morne d'Enfer. Judd 4696.

Entodon macropodus (Hedw.) C. Müll. Cloud forest; Morne d'Enfer to M. Fè Noir. Judd 4773. Det. William C. Steere.

Family Fissidentaceae

Fissidens adianthoides Hedw. Moist sinkhole vegetation; Truing Marassa. Judd 4619.

Fissidens asplenoides Hedw. Moist pine forest; Morne la Visite. Judd 4581.

Family Funariaceae

Funaria hygrometrica Hedw. var. calvescens (Schwaegr.) Mont. Cloud forest; Morne d'Enfer. Judd 4694.

Family Hookeriaceae

Cyclodictyon albicans (Hedw.) Broth. Moist sinkhole vegetation; Truing Marassa. Judd 4621. Det. William C. Steere.

Hypopterygium tamariscinum (Hedw.) Brid. Cloud forest; ravine east of Berac area. Judd 4814.

Family Hypnaceae

Cteniadelphus cylindricarpus (Card.) Bartr. Moist pine forest; Morne la Visite. Judd 4579, 4580.

Hypnum polypterum (Mitt.) Broth. Cloud forest; moist pine forest; Morne d'Enfer to Belle Fontaine/Roche Cabrit, Riviere Blanche. Judd 4589, 4700, 4806, 4870.

Mittenothamnium diminutivum (Brid.) Britt. Moist pine forest; Riviere Blanche. Judd 4602.

Family Lembophyllaceae

Porotrichodendrum superbum (Tayl.) Broth. Cloud forest; Morne d'Enfer, Riviere Blanche. Judd 4592, 4697.

Family Meteoriaceae

Meteoriopsis patula (Hedw.) Broth. Cloud forest; Riviere Blanche. Judd 4593.

Meteorium illecebrense (C. Müll.) Mitt. Moist pine forest; Riviere Blanche, "The Depression". Judd 4269, 4271, 4632.

Papillaria imponderosa (Tayl.) Broth. Moist pine forest; Morne la Visite, Riviere Blanche. Judd 4272, 4582.

Papillaria penicillata (Dozy & Molkenb.) Broth. Cloud forest, moist pine forest; Morne Fè Noir, M. la Visite, Riviere Blanche, "The Depression". Judd 4339, 4575, 4623, 4959.

Pilotrichella cuspidans Ren. & Card. Cloud forest, moist pine forest; Morne d'Enfer, Pic Cabaio to Roche Cabrit/Belle Fontaine, "The Depression". Judd 4639, 4698b, 4874, 4875b.

Pilotrichella pentasticha (Brid.) Wijk. & Marg. Moist pine forest; Riviere Blanche. Judd 4597, 4598b.

Squamidium leucotrichum (Tayl.) Broth. Cloud forest; Morne d'Enfer. Judd 4739.

Squamidium nigricans (Hock.) Broth. Cloud forest; Morne d'Enfer to M. Fè Noir, Riviere Blanche. Judd 4600, 4738, 4770.

Family Neckeraceae

Neckera urnigera C. Müll. Moist pine forest; Morne la Visite. Judd 4584b.

Porotrichum cobanense C. Müll. Moist sinkhole vegetation; Truing Marassa. Judd 4617b, 4620.

Porotrichum fasciculatum (Hedw.) Mitt. Cloud forest; ravine east of Berac area. Judd 4815.

Family Orthotrichaceae

Macromitrium guatemalense C. Müll. Cloud forest; Pic Cabaio to Roche Cabrit/Belle Fontaine. Judd 4871.

Macromitrium podocarpi C. Müll. Moist pine forest/cloud forest; Morne la Visite. Judd 4537.

Family Polytrichaceae

Polytrichum juniperinum Hedw. Moist pine forest/cloud forest; Morne la Visite, + scattered in pinelands. Judd 4577.

Family Pottiaceae

Anoectangium aestivum (Hedw.) Mitt. Cloud forest, moist sinkhole vegetation; Riviere Blanche, Truing Marassa. Judd 4599, 4613.

Barbula bescherellei Sauerb. ex Jaeg. Pine forest, cloud forest; Galette Seche, Riviere Blanche. Judd 4611, 4865. Det. William C. Steere.

Barbula subteretiuscula Card. Moist pine forest/cloud forest; Morne la Visite. Judd 4578a.

Hymenostylium recurvirostrum (Hedw.) Dix. Moist pine forest; Riviere Blanche. Judd 4341. Det. William C. Steere.

Hyophila involuta (Hook.) Jaeg. & Sauerb. Pine forest; Galette Seche. Judd 4868a. Det. William C. Steere.

Molendoa sendtneriana (B.S.G.) Limpr. Moist pine forest; Riviere Blanche. Judd 4277.

Pleurochaete luteola (Besch.) Thér. Pine forest; Galette Seche. Judd 4867.

Wessia jamaicensis (Mitt.) Grout. Moist pine forest; Riviere Blanche. Judd 4606b, 4612.

Family Prinodontaceae

Prinodon densus (Hedw.) C. Müll. Cloud forest, moist pine forest; Morne d'Enfer, M. la Visite, Pic Cabaio to Roche Cabrit/Belle Fontaine. Judd 4583, 4595, 4695, 4875a.

Family Thuidiaceae

Anomodon attenuatus (Hedw.) Hueben. Pine forest; + scattered in pinelands. Judd 4387b.

Anomodon rostratus (Hedw.) Schimp. Pine forest, cloud forest; Morne d'Enfer to M. Fè Noir, Riviere Blanche, + scattered in pinelands. Judd 4340, 4388, 4771.

Haplocladium microphyllum (Hedw.) Broth. Cloud forest; Morne d'Enfer. Judd 4736.

Thuidium minutulum (Hedw.) B.S.G. Cloud forest; Morne d'Enfer. Judd 4735.

Thuidium urceolatum Lor. Moist pine forest, moist sinkhole vegetation; Belle Fontaine, Riviere Blanche, Truing Marassa. Judd 4281, 4616.

Division Hepatophyta

Family Dilaenaceae

Pallavicinia lyellii (Hook.) S. Gray. Moist pine forest/cloud forest; Riviere Blanche. Judd 4603.

Family Grimaldiaceae

Asterella sp. Cloud forest, moist pine forest; ravine east of Berac area, Riviere Blanche. Judd 4610, 4955.

Family Lejeuneaceae

Drepanolejeunea orthophylla (Nees & Mont.) Bischl. Cloud forest; Riviere Blanche. Judd 4591a. Det. R. Grolle.

Lejeunea (sterile) sp. Moist pine forest; Riviere Blanche. Judd 4342. Det. R. Grolle.

Odontolejeunea sieberiana (Gott.) Schiffn. Moist pine forest; Riviere Blanche. Judd 4591b. Det. R. Grolle.

Family Marchantiaceae

Dumontiera hirsuta (Sw.) Nees. Moist pine forest; Riviere Blanche. Judd 4607.

Marchantia sp. Moist pine forest; Riviere Blanche. Judd 4280, 4295.

Family Plagiochilaceae

Plagiochila spp. Various habitats and localities. Judd 4275, 4584a, 4596, 4598a.

Family Porellaceae

Porella brasiliensis (Raddi) Schiffn. Cloud forest; Morne d'Enfer. Judd 4701.

Porella crispata (Hook.) Trev. Pine forest; "The Depression". Judd 4629.

Porella swartziana (Web.) Trev. Cloud forest, pine forest; Morne d'Enfer, "The Depression". Judd 4637, 4699.

Porella sp. Cloud forest; Pic Cabaio to Roche Cabrit. Judd 4872.

Family Radulaceae

Radula korthalsii Steph. Moist sinkhole vegetation; Truing Marassa. Judd 4618. Det. Kohsaku Yamada.

Radula voluta Tayl. Moist pine forest; Riviere Blanche, "The Depression". Judd 4270, 4636. Det. Kohsaku Yamada.

Family Rebouliaceae

Reboulia hemisphaerica (L.) Raddi. Cloud forest; Morne d'Enfer. Judd 4734.

Family Targioniaceae

Targionia hypophylla L. Moist pine forest; Riviere Blanche. Judd 4336.

Acknowledgements

Special thanks are due to the fellow members of the project who assisted in collecting plant specimens, especially James D. Skean, Dr. Fred Thompson, Dick Franz, Donald Dod, Dr. Charles Woods, Dr. Richard Baird, and Daniel Cordier. I also wish to thank Dr. Charles Woods and Paul Paryski for their assistance in locating geographical localities and important historical references.

I wish to thank the Dr. Carroll E. Wood, Jr., Michael Canoso and Walter Kittredge for their assistance during my visit to the Harvard University Herbaria in order to identify problematic Haitian collections. I also sincerely appreciate the hospitality of Dr. and Mrs. Richard A. Howard during my stay in the Boston area. Thanks are also due to Kent D. Perkins, registrar of the University of Florida Herbarium, for his help in processing specimen loans and gifts, and to Dr. Norris H. Williams, Keeper of the University of Florida Herbarium, for making available the herbarium computing facilities.

I am greatful to many individuals who provided identifications for certain taxonomic groups: Drs. Dana Griffin, III (most mosses and liverworts), Richard Harris (lichens), David Hall (Gramineae), Rolla Tryon (misc. ferns), William C. Steere (misc. mosses), Jack Gibson (misc. fungi), R. Grolle (misc. Lejeuneaceae), Kohsaku Yamada (Radula), Jiri Vana (misc. liverworts), Thomas Zanoni (misc. flowering plants), William R. Anderson (Byrsonima, Tetrapterys), Alan R. Smith (Thelypteris sancta), Timothy Plowman (Brunfelsia picardae), Elizabeth Kellogg (Eremolepis wrightii), Grady L. Webster (Hyeronima domingensis), and Tom Soderstrom (Chusquea abetifolia).

Last, I thank my wife, Beverly, for her understanding and patience throughout this study.

Literature Cited

- Arnell, S. 1956. Hepaticae collected in Cuba and Hispaniola by E. L. Ekman. *Bryologist* 59:271-276.
- Barker, H. D. & W. S. Dardeau. 1930. La flore d'Haiti. Port-au-Prince, Haiti. Service Technique de Département de l'Agriculture et de l'Enseignement Professionnel. viii, 456 pp.
- Buck, W. R. & W. C. Steere. 1983. Un listado preliminar de los musgos de la Española. *Moscosoa* 2: 28-53.
- Ciferri, R. 1936. Studio geobotánico dell'isola Hispaniola (Antille). Atti. Ist. Bot. "Giovanni Briosi" ser. IV, 8: 1-336.
- Crosby, M. R. & R. E. Magill. 1978. A dictionary of mosses. Second printing with corrections and additions, 43 pp. Missouri Botanical Garden, St. Louis.
- Crum, H. 1965. New moss records from Haiti. *Bryologist* 68: 232-233.
- Crum, H. & W. C. Steere. 1958. A contribution to the bryology of Haiti. *Amer. Midl. Nat.* 60: 1-51.
- Dod, D. D. 1984. Massif de la Hotte, isla peculiar: orquideas nuevas iluminan su historia. *Moscosoa* 3: 91-99.
- Ekman, E. L. 1926. Botanizing in Haiti. *U.S. Naval Med. Bull.* 24(3): 483-497.
- _____. 1928. A botanical excursion in La Hotte, Haiti. *Svensk Bot. Tidskrift*. 22: 200-219.
- Farr E. R., J. A. Leussink & F. A. Stafleu. 1979. Index nominum genericorum (Plantarum). Vol. 1. *Regnum vegetabile* 100: 1-630; Vol. 2. *Regnum vegetabile* 101: 631-1276; Vol. 3. *Regnum vegetabile* 102: 1277-1896.
- Holdridge, L. R. 1942. The pine forests of Haiti. *Caribbean Forest*. 4: 16-22.
- _____. 1947. The pine forest and adjacent mountain vegetation of Haiti considered from the standpoint of a new climatic classification of plant formations. Ph.D. Dissertation, 186 pp. Univ. of Michigan, Ann Arbor, MI.
- Howard, R. A. 1973. The vegetation of the Antilles, pp. 1-38 in A. Graham (ed.) 1973. *Vegetation and vegetational history of northern Latin America*. Amsterdam, Elsevier Scientific Publishing Company.
- Jiménez, J. de J. 1966 [1967]. Suplemento al Catalogus Florae Domingensis del Prof. Rafael M. Moscoso. 275 pp. Tipografia Valbonesi. Forli, Italy.
- Judd, W. S. 1980. Notes on the moss flora of Hispaniola. *Bryologist* 83: 555-558.
- Liogier, A. H. 1981. Flora of Hispaniola. Part I. *Phytologia Mem.* 3: 1-218.

- _____. 1983. La flora de la Española. II. Univ. Centr. Este [San Pedro de Macoris, Rep. Dom.] Ser. Ci. 15:1-420
- _____. 1985. La flora de la Española III. Univ. Centr. Este. [San Pedro de Macoris, Rep. Dom.] Ser. Ci. 22: 1-431.
- Moscoso, R. M. 1943. Catalogus florae domingensis. Parte I. Spermatophyta. 732 pp. New York, L. & S. Printing.
- Müller, C. 1893. Analecta bryographica Antillarum. *Hedwigia* 37: 219-266.
- Thériot, I. 1944. Musci hispaniolenses. Rev. Bryol. Lichenol. 14: 7-25.
- Thorne, R. F. 1983. Proposed new realignments in the angiosperms. *Nord. J. Bot.* 3: 85-117.
- Tryon, R. M. & A. F. 1982. Ferns and allied plants, with special reference to tropical America. 857 pp. Springer Verlag, New York.
- Urban, I. 1898-1928. Symbolae antillanae seu fundamenta florae indiae occidentalis. Fratres Borntrager, Berlin.
- _____. 1920-1921. Flora domingensis. Symbol. Antill. 8: 1-860.
- _____. 1921. Plantae haitienses novae vel rariores a cl. Er. L. Ekman 1917 lectae. *Ark. Bot.* 17(7): 1-72.
- _____. 1923. Zur Pflanzengeographie von Hispaniola. *Symbol. Antill.* 9: 1-54.
- _____. 1925. Pteridophyta domingensis. *Symbol. Antill.* 9: 273-397.
- _____. 1926a. Plantae haitienses novae vel rariores II. a cl. E. L. Ekman 1924 lectae. *Ark. Bot.* 20A(5): 1-65.
- _____. 1926b, 1927. Plantae haitienses novae vel rariores III(-IV) a cl. E. L. Ekman 1924-1926 lectae. *Ark. Bot.* 20A(15): 1-94 (1926); 21A(5): 1-97 (1927).
- _____. 1928. Plantae haitienses et domingenses novae vel rariores V. a cl. E. L. Ekman 1924-1927 lectae. *Ark. Bot.* 22A(8): 1-98.
- _____. 1929a & b, 1930. Plantae haitienses et domingenses novae vel rariores VI (-VII, -VIII) a cl. E. L. Ekman 1924-1928 lectae. *Ark. Bot.* 22A(10): 1-108 (1929a); 22A(17): 1-115 (1929b); 23A(5): 1-107 (1930).
- _____. 1931a & b. Plantae haitienses et domingenses novae vel rariores IX (-X) a cl. E. L. Ekman 1924-1930 lectae. *Ark. Bot.* 23A(11): 1-103; 24A(4): 1-54.
- Williams R. S. 1930. Haitian mosses collected by E. C. Leonard. *J. Washington Acad. Sci.* 20: 173-180.
- Zanoni T. A., C. R. Long & G. McKiernan. 1984. Bibliografia de la flora y de la vegetacion de la isla Española. *Moscosoa* 3: 1-61.

Macrolichens collected in La Visite and Macaya National Parks, Haiti.

All collections are identified by Dr. Richard C. Harris unless otherwise indicated. Lichens collected in Parc La Visite are indicated by "LV"; those collected in Parc Macaya are indicated by "M".

- Bulbothrix ventricosa (Hale & Kurokawa) Hale; LV; Judd 4591c.
- Caloplaca crocea (Krempelh.) Hafellner & Poelt; LV; Baird LV-15.
- Cladina confusa (R. Sant.) Follm. & Ahti; LV; Judd 4622.
- Cladina rangiferina (L.) Nyl. subsp. abbayesii (Ahti) Culb.; LV; Judd 4957.
- Cladina subtenuis (des Abb.) Hale & Culb.; LV; Judd 4958.
- Cladonia ceratophylla (Sw.) Sprengel; LV; Judd 4869.
- Cladonia didyma (Fee) Vainio var. didyma; LV; Judd 4624.
- Cladonia didyma (Fee) Vainio var. vulcanica (Zoll.) Vainio; LV, M; Baird LV-7, Judd 3681, 3710, 3745b, Skean 1452.
- Cladonia furcata (Hudson) Schrader; LV, M; Judd 4187, 4278, Skean 1453.
- Cladonia merochlorophaea Asah.; LV, M; Judd 3682b, 4168, 4745a.
- Cladonia multipartita (Mull. Arg.) Ahti; M; Judd 3682a.
- Cladonia pocillum (Ach.) O.J. Richard; LV; Baird LV-14, Judd 4626.
- Cladonia ramulosa (With.) Laundon; LV; Judd 4745b.
- Cladonia spiculata (Ach.) Ahti; M; Judd 4172.
- Cladonia squamosa Hoffm. var. subsquamosa (Nyl. ex Leight) Vainio; M; Judd 4060.
- Cetrariastrum vexans Culb. & Culb.; LV, M; Judd 3746, 4702.
- Coccocarpia pellita (Ach.) Mull. Arg.; M; Judd 3574.
- Dictyonema sp.; M; Judd 3784. Det. Jack Gibson.
- Heterodermia circinalis (Zahlbr.) ined.; LV; Judd 4628.
- Heterodermia leucomelos (L.) Poelt subsp. boryi (Fee) Swinsc. & Krog; M; Judd 3846b.
- Hypotrachyna costaricensis (Nyl.) Hale; LV; Judd 4703.
- Hypotrachyna croceopustulata (Kurokawa) Hale; LV; Judd 4294a.
- Hypotrachyna degelii (Hale) Hale; M; Judd 3919.
- Hypotrachyna sp.; LV, Judd 4294b.
- Leptogium azureum (Sw.) Mont. s. lat.; LV; Judd 4818.
- Leptogium sp.; LV, M; Judd 3552, 4685.
- Pannaria sp.; M; Judd 3675b.
- Parmelina minarum (Vainio) Skorepa; LV; Baird LV-6, LV-10, LV-20.
- Parmotrema conferendum (Hale) Hale; LV; Baird LV-3.
- Parmotrema crinitum (Ach.) Choisy; M; Judd 3683.
- Parmotrema haitense (Hale) Hale; LV; Baird LV-18.
- Parmotrema mellissii (Dodge) Hale; LV; Judd 4293a.
- Parmotrema reticulatum (Taylor) Choisy; LV; Baird LV-2.
- Parmotrema robustum (Degel.) Hale; LV; Judd 4293b, 4638.

Parmotrema tinctorum (Nyl.) Hale; LV; Baird LV-5, LV-8.
Parmotrema sp.; LV; Judd 4279.
Pertusaria texana Mull. Arg.; LV; Baird LV-9.
Peltigera sp.; M; Judd 3750 (det. W. S. Judd), 4212, s. n.,
Skean 1381.
Pseudocyphellaria aurata (Ach.) Vainio; LV, M; Judd 4817b,
Skean 1544.
Pseudoparmelia texana (Tuck.) Hale; LV; Baird LV-17.
Ramalina sp.; LV; Judd 4385b.
Sticta damaecornis (Sw.) Ach.; LV, M; Judd 3570, 3586 (det.
W. S. Judd), 4686, Skean 1286.
Sticta laciniata Ach.; M; Judd 3694b.
Sticta tomentosa (Sw.) Ach.; M; Judd 3704b.
Sticta sp.; LV; Judd 4627, 4817a.
Teloschistes flavicans (Sw.) Norm.; LV, M; Judd 3552b,
3846a, 4386.
Usnea rubicunda Stirton; LV, M; Baird LV-4, LV-11, Judd
3748, 4576b.
Usnea spp.; LV, M; Baird LV-13, LV-14, Judd 3747, 3847b,
4167, 4274, 4385a, 4574, 4576a, 4746.

Fungi collected in La Visite and Macaya National Parks,
Haiti.

All collections are identified by Dr. Jack Gibson unless otherwise indicated. Fungi collected in Parc La Visite are indicated by "LV"; those collected in Parc Macaya are indicated by "M". Mycorrhizal taxa are indicated by an asterisk.

- Boletus sp.; LV, also coll. M, specimen rotted; Judd 4819.*
Collybia cf. laccata Dennis; M; Judd 4202.
Cortinarius sp.; M; Judd 3849, 3927b.*
Cyathus striatus Willd.; M; Judd 3995.
Daldinia cf. concentrica (Bolt. ex Fries) Cesati & DeNotaris; M; Judd 3827a.
Favolus cucullatus Mont.; M; Judd 3740.
Fomes grenadensis (Murr.) Sacc. & Trott.; M; Judd 3718,
3781, 3845.
Fomes subroseus (Weir) Overh.; M; Judd 4075, 4204.
Fomes sp.; LV; Judd 4631.
Lepiota sp.; M; Judd 3926.
Marasmius sp.; M; Judd 3717.
Morchella deliciosa Fries; LV; Judd s. n.*
Nidularia emodensis (Berk.) Lloyd; M; Judd 4203.
Paneolus campanulatus (L. ex Fr.) Quill.; LV; Judd s. n.
Pholiota cf. trinitensis Dennis; M; Judd s. n.
Polyporus vinosus Berk.; LV; Judd 4630.
Polyporus sp.; LV; Judd s. n.
Stereum lobatum (Kunze) Fries; M; Judd 3456.

Note: Many specimens collected by Dr. Charles Woods and Dr. Richard Baird have not yet been identified.